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ELEVENTH BIENNIAL REPORT

BEING THE

Thirty-seventh and Thirty-eighth Annual Reports

OF THE

STATE BOARD OF HEALTH

OF THE

STATE OF KANSAS

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JUNE 30, 1920, TO JULY 1, 1922

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J. J. Entz, M. D., *Vice President*	Marion.
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Clay E. Coburn, M. D.	Kansas City.
H. L. Aldrich, M. D.	Caney.
C. H. Lerrigo, M. D.	Topeka.
John G. Egan, *Attorney*	Topeka.
S. J. Crumbine, M. D., *Secretary and Executive Officer, and Editor of Bulletin*	Topeka.

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William Levin, M. D., Director Public Health Laboratory	Topeka.
Frank G. Pedley, M. D., Epidemiologist	Topeka.
W. J. Davies, Acting State Registrar	Topeka.
F. E. Rowland, Assistant Chief Food and Drug Inspector	Topeka.
Helen A. Moore, M. D., Director, Division of Child Hygiene	Topeka.
B. K. Kilbourne, M. D., Director, Division of Venereal Diseases	Topeka.
Helen A. Cron, R. N., Supervisor, Division of Public Health Nursing,	Topeka.

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LETTER OF TRANSMITTAL.

OFFICE OF SECRETARY, STATE BOARD OF HEALTH,
TOPEKA, KAN., July 31, 1922.

To His Excellency, Henry J. Allen, Governor:

SIR—In compliance with the laws of this state, I have the honor to herewith submit to you the eleventh biennial report, or the thirty-seventh and thirty-eighth annual reports consolidated, of the Kansas State Board of Health, for the biennium June 30, 1920, to July 1, 1922.

Very respectfully,

S. J. CRUMBINE, M. D., *Secretary.*

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Eleventh Biennial Report of Kansas State Board of Health.

To the Governor of Kansas and the Members of the State Board of Health—Greeting:

Recovery from the great influenza epidemic that swept the state during the fiscal years of 1918, 1919 and early months of 1920 has been registered by an unusually low death rate for the biennium just closing. The only physical scars which seem to remain are an increasing number of activated cases of pulmonary tuberculosis and organic heart affections. Sporadic cases of influenza have occurred and are occurring at various places about the state up to the present date, but in the main the disease is mild in character.

A review of the health conditions of the state during the past biennium is fully set forth in the annual report of the secretary and the reports of the chiefs of divisions, to which the reader is referred.

The unprepared financial condition in which the State Board of Health found itself during the preceding biennium when the state was swept with a malignant disease of unprecedented morbidity and mortality, and the financial situation in which this department found itself after the adjournment of the last legislature, are the basis for the following recommendations for appropriations, which are absolutely essential if the State Health Department is to function in anything like an acceptable and effective fashion:

First. That a reasonable sum be set aside, to be used upon the authorization of the State Board of Health and the approval of the governor, to meet emergency conditions which may menace the safety and health of the citizens of the state.

Second. That an increased appropriation be given for diphtheria antitoxin and other biological products for free distribution to the indigent poor of the state. The appropriation for 1921 was entirely exhausted before six months had elapsed, and so the distribution of these life-saving products had to be suspended.

Third. That adequate appropriation be made for the maintenance and support of the Public Health Laboratory, which during the past biennium could not have functioned without the financial aid which was extended by the International Health Board.

Fourth. That the appropriation for the Division of Child Hygiene be sufficient in amount to match the federal funds which are allotted to Kansas for infant and maternity work.

Fifth. That appropriations for the Division of Venereal Diseases, the Division of Water and Sewage and the Division of Communicable Diseases and Sanitation be in amounts to adequately and efficiently carry on the work of those divisions without financial aid from outside sources.

Sixth. That the marriage-license fee for the Central Division of Vital Statistics be increased from fifty cents to one dollar, that funds may be available to properly carry on the work of the Division of Vital Statistics, which is becoming hopelessly behind, and unless remedied will be increasingly difficult to bring up to date. The proper care and quick availability of the vital records of the citizens of the state are of the greatest importance, and no reasonable expense is too great to guarantee that their legal rights be properly safeguarded.

Respectfully submitted, S. J. CRUMBINE, M.D.,
Secretary and Executive Officer.

FIRST QUARTERLY MEETING, 1920.

Held in Wichita, Kan., Friday, October 1, 1920.

Report of the Secretary.

GENERAL.

To the Members of the State Board of Health—Greeting:

The state of health of the people has been generally satisfactory since the annual meeting in June. That is to say, no malignant epidemic has prevailed within the state.

A comparison of the death rates during the current year with those of previous years is highly satisfactory in that there has been a substantial decrease in the crude death rates, particularly of deaths due to communicable diseases.

BUBONIC PLAGUE.

The Surgeon General called a conference of the state and municipal health officers at Galveston, Tex., on August 3 and 4, for the purpose of conferring on the bubonic-plague situation. Your executive officer attended the conference and received valuable instruction and information concerning the prevalence of bubonic plague in this country and the menace of the plague in the future. The facts of the situation as gathered in this conference and from a number of years' careful observation seem to be as follows:

Bubonic plague first made its appearance in this country in the ports of San Francisco in 1907. Owing to a lack of coöperation among the city officials and the people in general in San Francisco, the disease seems to have become thoroughly established in the rodent population of the city, and during the intervening years has gradually spread to the ground squirrels on the desert plains of California, so that there has occurred at irregular intervals sporadic cases of bubonic plague, not only at San Francisco, but at other points within the state, even as far south as Los Angeles. There have been, also, two other outbreaks, one in San Francisco and one in Oakland, which were of the dimensions of an epidemic.

In 1914 the bubonic plague appeared in the port of New Orleans, which after vigorous antirat measures seems to have been rather quickly subdued, but which has, however, repeatedly occurred at this port, the last epidemic occurring in October, 1919, since which time human cases have occurred at intervals up to the present time, large numbers of infected rats having been found in the meantime.

Despite the most vigorous repressive measures at ports of entry and at the infected ports in this country, the disease has slowly spread until it has appeared in the following additional seaport cities, namely: Seattle, Galveston, Beaumont and Pensacola, at which three latter cities it is still present. In the meantime the disease has spread in Mexican and Central American ports and upon the continents of Europe and Asia. Vera Cruz and Tampico, Mexico, have the disease rather widely disseminated, and within the past few months human cases of plague have been discovered in Paris, Liverpool and in one of the ports of Sweden. In India the disease has progressed far inland, a large number of deaths having occurred from bubonic plague in the last few months.

Several years ago the disease assumed the pneumonic type in Manchuria, sweeping that country during the cold months of winter and claiming over 100,000 victims.

In the city of Oakland, Cal., in July, 1919, a case of bubonic plague occurred, the result of infection from a ground squirrel. This case developed a secondary pneumonic form, and from this initial case, through exposure by contact, twelve other persons contracted the pneumonic type of the plague, with 100 per cent fatalities. This is the first and only instance of the pneumonic type of plague appearing in this country. So much for a brief history of the plague.

By training and instinct I am an optimist, but I confess that the plague situation has been to me the occasion of considerable worry and apprehension. Here we see this "black death," so-called, gradually spreading and infecting our rodent population despite the most vigorous repressive measures that have ever been undertaken in any public-health work; we see it slowly spreading in Central and South American points, in Europe and in Asia, despite the fact that we are perfectly familiar with the manner of its dissemination; we have seen, too, that this fatal malady may and does frequently assume the pneumonic type, which type is spread not by the bite of infected fleas from infected rats, but by contact, in the same manner as other malignant diseases of the respiratory tract are disseminated. The possibility, therefore, presents itself, that out of the widely spread disease in our rodent population in all the infected seaport cities mentioned, there may develop again, as did in the city of Oakland, the pneumonic type of the disease, and which under favorable conditions may rapidly spread throughout the country. Should this occur you can readily imagine what the toll of life exacted from our people would be! The probability of Kansas suffering from the bubonic plague is, perhaps, rather remote, yet it is not impossible that infected rats may be transported in box cars from Galveston or Beaumont to places in Kansas; indeed, it is entirely within the range of probability, for most of the Kansas export grain is going to these points, and thousands of cars find their way to and from these infected seaports during the course of a month. Experts tell us that the disease is more likely to assume the pneumonic type where the infection is spread in cold climates, or during the winter months in the temperate zone. If, then, the bubonic plague should occur during the winter months in any of the central or northern states, the possibility of the disease assuming the pneumonic form readily presents itself.

The Board's secretary is not a prophet, or the son of a prophet, but somehow I am impressed with the gravity of the situation to such an extent that I am coming to feel if not to believe that the next great pandemic this world is to see is that of the plague. How soon it is to come, or where it is to start, remains to be seen. So impressed was I with the gravity of the situation upon my return from Galveston that I presented the matter to the governor, with the request that he issue a rat-extermination proclamation, which he very kindly consented to do, whereupon circular letters were addressed to the mayor and municipal authorities of all incorporated cities in Kansas, a copy of which is herewith presented:

TOPEKA, KAN., August 13, 1920.

To the Mayor and Municipal Authorities of the Cities of Kansas—Greeting:

The governor has issued the following proclamation, which is self-explanatory:

PROCLAMATION.

At a conference of the state health officers with the Surgeon General of the United States Public Health Service, held at Galveston, Tex., August 3 and 4, there was general agreement expressed that this country is threatened with a visitation of bubonic plague. Human cases of plague have appeared in five of our coast cities, gradually spreading since the first case was discovered in New Orleans last October. The disease is also widely prevalent in several Mexican cities.

Bubonic plague is primarily a disease of rodents, especially of rats, thus effective measures of prevention or control of the disease must be directed against the rat.

Moreover, the annual economic loss from rats and mice in the destruction of food for man and beast, the loss of young poultry and the damage to building material and clothing is so great as to challenge the active interest of every citizen of the state. The United States Public Health Service declares that in cities the rat population is at least equal to the human population and that in the agricultural sections the rat population is from four to ten times the human population. The annual upkeep per rodent, estimated on prices before the war, was two dollars per rat, which, with present prices, is at least four dollars per rat. Using these figures as a basis, a conservative estimate of the annual loss in Kansas from rats and mice is at least thirty million dollars. In view of this unprecedented waste and in view of the growing menace of bubonic plague, I, Henry Allen, governor of Kansas, call upon the people of Kansas to engage in a rat-extermination campaign, and especially invite the coöperation of municipal authorities, county commissioners, boards of health, and chambers of commerce and allied commercial and civic organizations to join in an organized and united effort to rid each community of rats and mice.

It is further suggested that the week beginning August 23 be set aside as a special week for rat extermination, to the end that the menace of malignant disease and preventable waste of food be minimized.

Given under my hand and seal this 16th day of August, 1920.

HENRY J. ALLEN, *Governor.*

The facts presented at the conference at Galveston indicate that the bubonic-plague situation is a threatening one, and it behooves every city in the United States to organize a defensive warfare against the rat. The great annual economic loss caused from the depredations of rats and mice is sufficient cause, aside from the menace of plague and certain parasitic diseases conveyed by the rat, to warrant a vigorous extermination campaign against these destructive rodents.

Will you not, therefore, present this matter to the people of your city by proclamation and by getting in touch with your commercial club and other civic clubs, including Boy Scouts and other boys' organizations, to the end that the week beginning August 23 may find your efforts coördinated and concentrated in the most effective fashion.

A small bounty for rats will enlist the active support of practically every boy in your city. Methods of extermination include trapping, preferably by the guillotine trap, wire cage traps, and poisoning, preferably by barium chloride. When placing poisoning for rats, great care should be taken that children, the domestic animals or chickens cannot reach the poison.

Every rat- and mouse-extermination campaign rests primarily upon the fundamental principle that all food supplies for man and beast and every form of garbage must be securely protected beyond the reach of these rodents.

This department will be glad to be advised of any action you may take in the matter.

Very truly yours, S. J. CRUMBINE, M. D., *Secretary.*

In like manner similar letters were sent to all the health officers in Kansas, urging that the most vigorous measures be undertaken to carry on an effective "bat the rat" campaign. To what extent this campaign has been carried out over the state I am not in a position to advise at this time. However, the people of Kansas have not been without warning, so that the State Board of Health may not be held accountable should such an epidemic overtake us.

THE CONSOLIDATED LABORATORIES.

I have to advise that the work of our consolidated laboratories is proceeding with a great deal of satisfaction. The director, Doctor Maxcy, has shown great skill and energy in carrying on the work of the laboratory.

During the absence of Doctor Tuttle on his vacation, I had occasion to send Doctor Maxcy to three different points in the state where typhoid fever had appeared in epidemic form, and in each instance the epidemic was found to be due to a chronic carrier. His ability and skill were put to the test, but in each instance he discovered the source of the disease in the carrier case. In one instance, at least, the chronic carrier has undoubtedly been the source of typhoid infection in her community for a number of years, there occurring in this particular neighborhood annually more or less typhoid fever.

WORK OF THE DIVISIONS.

I have to report that the work of the various divisions of the department is proceeding in a most satisfactory manner. No special item of interest has come up for presentation at this time.

The principal matter for consideration of the Board at this meeting is that of the revised rules governing the sanitation of intrastate transportation carriers. Respectfully submitted, S. J. Crumbine, *Secretary.*

Minutes of the First Quarterly Meeting, 1920.

The first quarterly meeting of the State Board of Health was held in the parlors of the Hotel Lassen, Wichita, Kan., October 1, 1920. The session was called to order at two o'clock p.m., and upon roll call there were present: Dr. O. D. Walker, president, presiding; Doctors Lerrigo, Axtell, Clayton, Earnest, Entz, and Ewing, and Mr. Egan, attorney for the Board. Mr. Tilford, of the board of conferees, Mr. Jewell, engineer, and Doctors Tuttle, Kilbourne and Maxcy, of the staff, were also present.

A quorum being present, the president called for a reading of the minutes of the annual meeting, which were read, and upon motion were approved and ordered placed on file.

The report of the secretary was then read, whereupon a general discussion of that portion of the secretary's report dealing with the bubonic plague was indulged in, and the secretary was instructed to write to the president of the Southwest Kansas Medical Society and arrange, if possible, for an address to be given before the society by an officer of the United States Public Health Service on the menace of bubonic plague, and that in like manner, if practicable, to have a paper presented at the next State Medical Society meeting.

The rules and regulations relating to the control of interstate carriers were then taken up, read section by section, and upon motion, were adopted as amended, the following members of the board voting in the affirmative: Doctors Lerrigo, Axtell, Clayton, Earnest, Entz, Ewing and Walker, and Mr. Egan.

The secretary was instructed to have the same printed in the official state paper.

Upon motion the previous regulations relating to the intrastate transportation of those suffering from communicable diseases and the regulations relating to the regulation of common carriers were revoked, the new regulations being adopted in their stead.

The special committees on the increase of vital-statistics fees for the conduct of the division and the committee on sewage pollution of the Neosho and Verdigris rivers made no report, whereupon the president ordered the committees to be continued.

Upon presentation by the secretary of the frequent and more or less continued pollution of the natural waters of the state by the Standard Oil Refinery at Neodesha, the Board by unanimous vote passed the following order, the following members of the Board voting in the affirmative: Doctors Walker, Lerrigo, Axtell, Clayton, Earnest, Entz, Ewing, and Mr. Egan.

The order follows:

NOTICE TO THE STANDARD OIL COMPANY.

WHEREAS, Repeated complaints have been made by the city authorities of the cities of Independence, Cherryvale and Coffeyville concerning the disagreeable and foul odors and taste of the water supplied said cities, and

WHEREAS, Repeated investigation, both by personal inspection of the engineers of the Kansas State Board of Health and by laboratory tests made in the water and sewage laboratories of the State Board of Health, has shown the cause of the foul and disagreeable odors and taste of the water being supplied to said cities is due to the discharge of waste or sewage produced by refining oil, or other industry, at the plant of the Standard Oil Company at or near Neodesha, in Wilson county, Kansas: therefore, be it

Resolved, That the Standard Oil Company be hereby notified to discontine, after November 1, 1920, discharging waste or sewage produced by refining oil, or other industry, at the plants at or near Neodesha, in Wilson county, into Fall river or other natural waters of the state, for the reason that such discharge is injurious and prejudicial to the health of the inhabitants of Wilson and Montgomery counties in the state of Kansas.

Dated October 1, 1920. THE KANSAS STATE BOARD OF HEALTH.
By O. D. WALKER, M. D., *President*.

Attest: S. J. CRUMBINE, M. D., *Secretary*.

Upon motion the president appointed a committee of the secretary, the engineer and the attorney for the Board to present regulations at the next quarterly meeting of the Board for the supervision and sanitary control of swimming pools.

An informal discussion was had concerning the regulations relative to the construction and operation of mausoleums, and the secretary was instructed to present the matter for further discussion at the next quarterly meeting.

No further business appearing, upon motion the Board adjourned.

The following bills were audited and allowed:

Dr. O. D. Walker	$26.33
Dr. J. T. Axtell	8.38
Dr. Ione Clayton	12.48
Dr. W. M. Earnest	32.76
Dr. J. J. Entz	10.37
Dr. C. H. Ewing	11.45
Dr. C. H. Lerrigo	16.48
John G. Egan	16.71

Respectfully submitted,
S. J. CRUMBINE, M. D., *Secretary*.

SECOND QUARTERLY MEETING, 1920.

Held in Lawrence, Kan., Saturday, November 13, 1920.

Report of the Secretary.

To the Members of the State Board of Health—Greeting:

There is nothing of unusual interest to report at this time. No unusual events have occurred since the last quarterly meeting, and the state of the public health has been fairly satisfactory, except there has been a widespread epidemic of diphtheria prevalent through the southeastern third of the state, with small local epidemics throughout other sections of the state. The present epidemic is unusual in two respects: first, that it has occurred at least a month earlier than it has for many years, the usual time for the appearance of diphtheria being the latter part of November and the month of December; second, the epidemic is especially characterized by its mildness. Our director of laboratories, Doctor Maxcy, informs me that he has demonstrated a different type of the Klebs-Loeffler bacillus than is found in the average or normal case of diphtheria. His findings have been confirmed by several other observers. It is, therefore, now fairly well established that we have in diphtheria, as we now know to be the case in pneumonia, meningitis and some of the other communicable diseases, two or more types of the organism specific to that disease, the virulence of which depends in the main upon the type of the organism present. While there has been an unusually large number of cases of diphtheria, the mortality has been very low.

Agreeable with your instructions given at the annual meeting, I entered into negotiations with the International Health Board, requesting that several counties in this state be selected for demonstration purposes on a full-time health basis. Accordingly it has been extended to the counties recommended, namely, Marion and Geary counties, where full-time health organizations are established.

On or about October 23, Dr. A. J. Warren, of the International Health Board, was assigned to Kansas as a field agent in rural sanitation work, to work under the direction of your executive officer. He has been requested to visit Marion and Geary counties, and, in coöperation with the units there, plan a program of public-health work for the coming year, which will make a maximum showing in the results obtained to meet the requirements of the aid extended from the International Health Board. After this work has been accomplished he will be detailed to two or three other counties in Kansas for the purpose of demonstrating what a full-time health organization can do. These counties have not yet been selected.

The state of Kansas has been very greatly favored by the timely assistance of the International Health Board, through my good friend, Dr. John A. Ferrell.

There is nothing further to report to the Board at this time.

Respectfully submitted,

S. J. Crumbine, M. D., *Secretary.*

Minutes of the Second Quarterly Meeting, 1920.

The second quarterly meeting of the State Board of Health was held in the Y. M. C. A. at Lawrence, Kan., November 13, 1920.

Upon roll call the following members were present: Dr. O. D. Walker, president, presiding; Doctors Coburn, Ewing, Earnest, Lerrigo, Aldrich, Entz and Axtell. The following members of the advisory board were present: Mr. Rowland, Professor Sayre, Professor Bailey, Mr. Jewell, engineer, and Doctors Tuttle, Sherbon and Kilbourne. The following conferees were present: Messrs. Tilford, Rushton and Haskins.

The minutes of the first quarterly meeting were read, and upon motion were approved and ordered placed on file.

The report of the secretary was then read, and upon motion was ordered placed on file.

The report of the special committee on water pollution of the Neosho and Cottonwood rivers was made by Doctor Axtell, and upon motion the committee was continued to report at the next quarterly meeting.

The engineer, Mr. Jewell, reported on his inspection of mausoleums in several other states, and was instructed to present rules for the regulation of mausoleums at the next quarterly meeting; also rules for the sanitary supervision of swimming pools.

Doctor Lerrigo then presented the following resolution, which upon motion was unanimously adopted:

REGULATION 25.

In the event of the presentation of certificates of birth or death occurring prior to the date upon which the vital-statistics law became effective, it is ruled by the State Board of Health that no certified copy shall be made of same unless said certificate is supported by an affidavit in legal form sworn to by the person signing the certificate. In issuing such certified copy the state registrar will issue also a copy of the affidavit and will mark on the face of the certificate and also on his own record, "Certificate not filed until ————. Supported by affidavit."

Doctor Aldrich then presented certain plans and specifications, which, upon approval of the engineer, were unanimously approved.

A committee of the State Ice Cream Manufacturers' Association presented certain matters to the Board and to the state dairy commissioner, Mr. Jones, who was present, relating to the adoption of ice-cream standards. After an extended discussion the president appointed a committee, consisting of Mr. Manley, representing the ice-cream manufacturers; Mr. Jones, representing the State Dairy Commission; and Mr. Rowland, representing the State Board of Health, to confer concerning such amendments to the State Dairy Commission law relating to the standards for ice cream as might seem to be expedient.

A committee of master bakers then presented certain matters to the Board relating to the Board's regulations on wrapping of bread and on the statement of net weights. After an extended discussion the president appointed a committee, consisting of Doctors Coburn and Axtell and Mr. Rowland, to make an investigation concerning such matters and report their recommendations to the executive officer of the Board and to the next quarterly meeting.

No further business appearing, the Board adjourned.

The following bills were audited and allowed:

Dr. O. D. Walker	$21.82
Dr. Clay E. Coburn	7.16
Dr. C. H. Ewing	29.50
Dr. W. M. Earnest	28.61
Dr. H. L. Aldrich	23.12
Dr. C. H. Lerrigo	2.39
Dr. J. J. Entz	15.55
Dr. J. T. Axtell	23.87
J. F. Tilford	16.56
Frank Rushton	3.74

Respectfully submitted,

S. J. CRUMBINE, M.D., *Secretary.*

THIRD QUARTERLY MEETING, 1921.

Held in the Office of the Secretary, Topeka, Kan., February 15, 1921.

Report of the Secretary.

To the Members of the State Board of Health—Greeting:

The epidemic of diphtheria that was widely prevalent at the time of our last quarterly meeting has about subsided, but a few isolated endemic cases throughout the state are now being reported. From the standpoint of numbers it is the greatest epidemic of diphtheria Kansas has ever experienced, although fortunately it was very mild in character; therefore the mortality rate was correspondingly light.

Smallpox, in the usual mild form, is rather widely spread, it having invaded the sacred precincts of the house of representatives, one member of that august body being in quarantine at the present time. Of course it is the same old story—the unvaccinated and therefore the susceptible portion of our population provide the victims of this easily preventable disease.

A mild type of scarlet fever is also epidemic in several portions of the state. Difficulties in the way of quarantine are encountered on account of the exceedingly mild type of the disease, for in many instances cases are unattended by physicians, and therefore are neither reported nor quarantined. The same is true of whooping cough, and to a lesser degree of measles.

There seems to be but one remedy for these conditions, and that is a full-time health organization for each county in the state, whose business it is to see that the laws of the state are enforced and that education concerning the prevention of these communicable diseases is constantly given to the people.

The personnel of the working force of the department has suffered considerable change the past few months:

Dr. Kenneth F. Maxcy has resigned as director of the Public Health Laboratory, effective January 1, to continue his studies at the School of Public Health and Hygiene at the Johns Hopkins University, leading to the degree of doctor of public health. His resignation was not accepted, but instead a leave of absence was granted until the first of next July, in the hope that he would return to take up his work after receiving his degree. His return to us will be largely conditioned upon the action of the legislature in voting and providing a proper maintenance and salary schedule so that the work may be carried on as it has been during the past six months.

Mrs. Estelle Patrick, public health nurse, resigned from duty on December 1.

Miss Nina Nicholas resigned her position in the Division of Vital Statistics, which became effective January 1.

Mrs. Dorothy Harrington resigned her position, to become effective January 1.

Miss Annette Nicoll, assistant director of the laboratory, resigned her position, to become effective January 1.

Upon the resignation of Doctor Maxcy, director of the laboratory, Miss Margaret Scofield was appointed state bacteriologist to succeed Miss Nicoll, resigned, effective January 1.

He also recommended that Miss Law be appointed technician, at a salary of $125 a month, to succeed Miss Scofield, and that Mr. Theron Hunter, technical assistant, be advanced to that position, his salary to be increased from $75 per month to $100 per month, effective January 1.

All of these recommendations have been temporarily approved pending the final action of the Board at this session. I would respectfully recommend that the action be confirmed.

On January 12 Dr. T. D. Tuttle, epidemiologist, handed me his resignation, as follows:

> JANUARY 12, 1921.
>
> Following my verbal notification of December 28, I submit herewith my resignation as chief of the Division of Communicable Diseases, to take effect January 15, 1921.
>
> I desire to submit, through you, to the members of the Board and every employee of the staff my heartfelt appreciation of the constant courtesy and consideration extended to me. My stay here has been indeed a pleasant one, and were it not for the fact that my living expenses, on account of my son being in college, are high, and the new position tendered me carries a very material increase in compensation, I would not hesitate in choosing my present position.
>
> Respectfully submitted, T. D. TUTTLE.

There was nothing to do but to accept Doctor Tuttle's resignation. His leaving the state was based purely on the question of an increase in salary, and not because of any friction, or because he did not like the job, or the state, or the people, for he very much preferred to stay, had the salary been adequate.

I immediately got in touch with Dr. John A. Ferrell, of the International Health Board, requesting that the Board's field agent, Dr. A. J. Warren, be appointed temporary acting epidemiologist until after the legislative session, when we would know just what we would have to offer to the best man in the country available for such position. I would recommend that the Board give the executive officer authority to secure as highly trained man as may be obtained at the salary available. I have recommended to the auditor and to the committee on fees and salaries that the salary of the epidemiologist be increased to $3,600 a year, for I fear we cannot secure a man of the quality and training Kansas requires and desires to have at the present salary fixed in the statute.

The resignation of Mr. Linford Kistler, statistician for the Division of Vital Statistics, has been placed in my hands to become effective March 1. Mr. Kistler is leaving the service on account of salary. Here again the work of the division will be very greatly crippled for a long time to come by losing Mr. Kistler's valuable service.

Mr. F. E. Rowland, of the Division of Foods and Drugs, has advised me that he will be obliged to leave the service if his salary cannot be increased. He has a family of five to look after, and finds it impossible to break even, much less save anything, on his present salary. Here again one of the most valuable men, in my judgment, in the country engaged in food and drug work will be lost to the state because of insufficient salary.

I think the Board will agree with me when I say that the situation is extremely critical for the department, for it is altogether likely that several other workers in the department will not continue in our service unless the legislature is able to provide an increase in salaries. I earnestly request the members of the Board, in so far as possible, to confer with their representatives in the house and senate before leaving the city concerning the general appropriations for this department and the matter of salary increases.

RED CROSS.

Agreeable with an understanding with the Southwestern Division of the American Red Cross, the result of a meeting recently with the representatives of the division at St. Louis, a new state supervisor of public-health nursing has been appointed—Miss Pearl Laptad, formerly assistant state supervisor of Red Cross nursing. The agreement provides that she shall have office room with the State Board of Health and shall serve as state supervisor over the State Board of Health nurses, the Red Cross nurses and the tuberculosis nurses, if the state association sees fit to go into the arrangement, the three parties concerned sharing equally with the salary. This arrangement will practically put at the service of the State Board of Health all of the Red Cross county nurses. The detailed arrangements have not yet been carried out, pending the approval of the Board, which I trust will be given.

Dr. Livingston Ferrand, director of the executive committee of the American Red Cross, has called the executive committee of the State Health Officers' Association for a conference at Washington on the 19th of this month, in order to definitely and finally settle all differences of understanding between health officers and the American Red Cross, in relation to the Red Cross public-health program. Being chairman of the executive committee of the State Health Officers' Association, I will, of course, attend. It might be well for the Board to give approval to the plan for a state supervising nurse, as agreed with the Southwestern Division, pending the final agreement, which will probably be made in Washington on the 19th. If the Board will so express its approval I shall be glad to notify the Southwestern Division in accordance therewith. Respectfully submitted, S. J. CRUMBINE, M.D.,
Secretary and Executive Officer.

Minutes of the Third Quarterly Meeting, 1921.

The third quarterly meeting of the State Board of Health was held in the office of the secretary at Topeka, Tuesday, February 15, 1921. On roll call the following members answered present: Dr. O. D. Walker, president, presiding; Doctors Coburn, Aldrich, Ewing, Lerrigo, Entz, Axtell, Little, and Judge Egan. Doctor Little had previously taken the oath of office in the office of the secretary of the state. The engineer, Mr. Jewell, and members of his staff also were present.

The minutes of the last quarterly meeting were read, and upon motion were approved and placed on file.

The report of the secretary was then read, and upon motion was approved and ordered placed on file.

The recommendations made by the secretary were taken up for discussion, and upon motion the changes in the positions and personnel of the laboratory recommended by the secretary were immediately approved.

Upon motion the following committee was appointed by the president to draw up a resolution to present to the house and senate fees and salaries committees, urging increases in salaries for the employees of the department: Doctors Coburn, Ewing and Crumbine. The resolution presented by the committee follows:

WHEREAS, There have been a number of resignations from the working staff of the State Board of Health during the past year owing to insufficient salary; and

WHEREAS, The positions in the Department of the State Board of Health are largely technical in character and require men of training and skill; and

WHEREAS, Higher salaries are paid in other communities and states for similar work, so that it has become increasingly difficult to obtain men of training and experience in the highly technical positions in the Department of the State Board of Health: therefore, be it

Resolved, That in order that the standard of efficiency of the work in the Department of the State Board of Health shall be maintained and increased, that an increase in salaries be given that will make them comparable with similar positions held in other states: be it further

Resolved, That the State Board of Health in regular quarterly session, this date request the committee on fees and salaries of the House and Senate of the Kansas legislature to give serious consideration to the above-cited conditions; be it further

Resolved, That a copy of these resolutions be sent to the chairman of the house and senate committees on fees and salaries.

C. H. EWING, M. D.,
C. E. COBURN, M. D.,
S. J. CRUMBINE, M. D.,
Committee for the Board.

Upon motion the secretary was authorized to arrange for entering into an agreement with the Southwestern Division officials of the American Red Cross for the appointment of a state supervising nurse, the department to share in the salary of such nurse.

The committee on definitions and standards then made their report, following which the special committee on water pollution made their report of progress.

The engineer, Mr. Jewell, presented the rules governing the construction of mausoleums, which, after discussion, upon motion were unanimously approved and ordered to be printed in the state paper.

The rules follow:

RESOLUTION *IN RE* MAUSOLEUMS.

WHEREAS, Chapter 85 of the Laws of Kansas of 1917 requires that all mausoleums, vaults or burial structures shall be constructed in accordance with plans which have been approved by the State Board of Health, and other provisions of the laws of Kansas authorize said board to adopt rules and regulations to make effective the statutes conferring health powers upon said board; and

WHEREAS, A thorough examination of structures in various states, shows that the existing rules and regulations should be revised: therefore, be it

Resolved, That the construction, maintenance and use of mausoleums, vaults, crypts or burial structures within the state of Kansas shall be governed by the following rules and regulations:

1. Any person, firm or corporation desirous of constructing any burial structure which shall be wholly or in part aboveground shall apply to the Kansas State Board of Health for a permit for such construction.

2. Application for permits for such construction shall be made on forms furnished by

the State Board of Health and shall be accompanied by detailed plans and specifications, in triplicate.

3. On approval of said plans and specifications for the proposed burial structure by the engineer of the board, the secretary shall issue a permit in triplicate for the construction, and shall send two copies of the permit, approved plans and specifications to the party who makes application and retain one copy for the files of the board.

4. Any person, firm or corporation desirous of using any burial structure as aforementioned for the purpose of interring or depositing therein any dead bodies shall not be permitted to use the same until there shall have been obtained from the Kansas State Board of Health a final certificate permitting such interment.

5. Application for permits for the use of a burial structure for interment shall be made to the board at least ten (10) days before it is desired to put the same into use, in order that the engineer of the board may make a final inspection to determine whether or not the work has been constructed in accordance with the plans and specifications as submitted.

6. On the final approval of the building by the engineer of the board, the secretary shall issue a permit in triplicate for the use of said building for the interring or depositing therein of dead bodies, and shall send two copies of the permit to the party who makes application, and retain one copy for the files of the board.

7. In the design of burial structures the following details must be included:

(*a*) The structure must be so designed that each cell or crypt shall be readily accessible for inspection by persons authorized to make such inspection before final interment.

(*b*) Each crypt shall be so designed that it can be sealed to prevent odors from reaching the public space or corridor of the mausoleum. Each crypt shall be provided with a ventilation and drainage system acceptable to the board. Ventilation or drainage from one crypt shall not pass through another. The minimum size of pipes for either ventilation or drianage to be one and one-half inches in diameter.

(*c*) No live-air spaces smaller in size than will allow for thorough inspection and repairing of joints from the inside of said air spaces will be allowed, except the pipes for ventilation and drainage of crypts.

(*d*) Hollow walls shall be sealed so as to make the air space "dead."

(*e*) Any burial structure intended for public or community use shall be provided with some type of heating system acceptable to the board.

(*f*) In the case of public mausoleums, or those with a corridor or chapel, suitable ventilation, independent of the above and directly connected to the outside air, shall be provided.

(*g*) Special attention will be given to such details as: Depth and width of foundations; size and spacing of reinforcing steel; materials and method used in construction of roof; permanence of material used for exterior of walls as determined by test for absorption of moisture; materials used for window and door sash, grills, gates, etc.; materials and method used in anchoring or tying of walls together where they are made up of two or more independent walls; materials for concrete, plaster, mortar, etc.

Mr. Jewell then presented tentative suggestions concerning the regulation of swimming pools, whereupon the engineer was instructed to make investigations concerning the efficiency of various methods for purifying the water of swimming pools, and to be prepared to report at the annual meeting in June.

The special committee on bread wrapping and weighing followed with their report of investigation, which report was approved and the committee discontinued.

Doctor Aldrich then introduced the following resolution, which upon motion was unanimously approved:

WHEREAS, The Kansas State Tuberculosis Association is doing a work of great benefit to the people of the state of Kansas and a work that supplements the work of the State Board of Health in an admirable manner; and

WHEREAS, The aforesaid association is not yet able to provide sufficient funds to employ a whole-time executive secretary without crippling to some extend its field force: be it

Resolved by the Kansas State Board of Health, That Dr. C. H. Lerrigo, employed by this Board as state registrar, may give to the State Tuberculosis Association such supervision as does not interfere with his duties as state registrar, and is approved by the executive officer of this Board.

The secretary presented the desirability of the Division of Communicable Diseases employing a well-trained public-health nurse to assist the epidemiologist in the work of the division, whereupon the secretary was authorized to employ such a nurse after the legislature had adjourned, providing sufficient funds were appropriated by the legislature to carry on the work.

The engineer then presented the matter of the Mankato water supply, which was to the general effect that it is subject to continuous pollution from surface drainage, and should be considered as a surface supply and come under the requirements and regulations of surface supplies, whereupon the Board, by unanimous vote, declared the Mankato supply to be a water supply subject to the same rules and regulations as other surface supplies, and instructed the engineer to take action accordingly.

Upon motion the appointment of Mr. Ernest Boyce as assistant engineer for the State Board of Health was approved, his employment dating from October 1, 1920.

No other business appearing, the Board upon motion adjourned.

The following bills were audited and allowed:

Dr. O. D. Walker	$23.39
Dr. C. E. Coburn	10.22
Dr. H. L. Aldrich	65.95
Dr. C. H. Ewing	29.39
Dr. J. J. Entz	14.46
Dr. J. T. Axtell	19.06
Dr. Belle Little	5.08

Respectfully submitted, S. J. Crumbine, M.D.,
Secretary and Executive Officer.

ANNUAL MEETING, 1921.

Held in the Office of the Secretary, Topeka, Kan., Thursday, June 30, 1921.

Report of the Secretary.

To the Members of the State Board of Health—Greeting:

It is increasingly evident that there is a growing appreciation of the fact that the defensive strength of a nation, as well as the foundation for its productive wealth, and therefore its social welfare and happiness, is in its final analysis conditioned upon the health of its people. Sick people cannot be producers, nor are they usually happy and contented or capable of contributing to the social welfare of the state; therefore, human sickness may be properly considered a community ailment which very profoundly and injuriously affects the entire social organism.

With the appreciation of these self-evident facts by the public, numerous organizations and societies have been formed to carry on various phases of public-health work, until to-day the governmental agencies created for that purpose find their work either supplemented and encouraged or duplicated and hindered, according to the intelligent interest or doubtful motive of the extragovernmental agency operating.

Viewing the situation as a whole, it must be considered as an aroused public interest in the fundamental facts above stated, and therefore a matter for congratulation and encouragement to all public-health workers, the apparent indifference of our state legislatures to the contrary notwithstanding. Whatever interferes with the public welfare and public health must be a matter of concern to the state, nor should the state expect that its responsibility in relation thereto should be shifted to or assumed by extragovernmental organizations or agencies, except only for the express purpose of demonstration or encouragement to the end that the state may be brought to a knowledge of its responsibility and to its early assumption of such duties and responsibilities as will best safeguard the public health.

Kansas, through its legislature, has not seemed to sense its responsibility to the people of the state in the prevention of disease and the promotion of health, and as a result the appropriations made were insufficient to properly conduct and continue the work of the State Board of Health in several of its most important divisions. So serious is the situation that funds from outside sources must be secured or the laboratory work of the Board for the sick people of the state will have to be practically abandoned and the splendid work for venereal-disease control be so greatly curtailed as to be ineffective in results; also, the health car, which has been a blessing to so many mothers and children, especially in the rural sections of the state, during the past four years, will no longer continue its beneficent journey throughout the state.

Accordingly, overtures have been made to the International Health Board, a benefaction of the Rockefeller Foundation, to save the public-health work in Kansas by appropriating sufficient money to continue the laboratory work so well carried on through the consolidation and reorganization of our laboratories last July. After a thorough investigation by that great organization this work was considered by them to be of such great importance and to so vitally affect the welfare of the people of the state in the continuation of the work of the State Board of Health as to warrant a gift of money for that purpose. By this arrangement sufficient money can be released from the small appropriation made by the legislature to continue the work in the Division of Venereal Disease in a greatly reduced measure. Financial aid to clinics will have to be abandoned, and nothing but educational work and the free distribution of arsphenamine can be undertaken.

The International Health Board has also made a gift to supplement the meager appropriation made by the legislature to provide for a full-time health demonstration in six counties in Kansas, and steps have already been taken to secure the six counties which will coöperate with the State Board of Health and the International Health Board in putting on a fulltime health demonstration. Altogether the International Health Board has appropriated the sum of $17,400, through which means we will be able to save the public-health work of Kansas from disintegration, and furthermore to save, through the work of our laboratories and full-time health demonstrations, the lives of many Kansas people.

The following budget for this work has been agreed upon and which is herewith presented with recommendation for your approval:

Kansas State Board of Health Budgets for Two Years Beginning July 1, 1921.

LABORATORY.

1. Director, salary	$3,600.00
2. Director, travel	200.00
3. Assistant director, salary	2,000.00
4. Technician	1,500.00
5. Stenographer-clerk (100 per cent state)	1,200.00
6. Supplies, maintenance	2,000.00
7. Incidentals and contingent	500.00
	$11,000.00

SOURCE OF FUNDS.

State	$5,500.00
International Health Board	5,500.00
	$11,000.00

COUNTY HEALTH WORK AND EPIDEMIOLOGY.

1. State director, salary	$1,200.00
2. Epidemiologist, salary (state 100 per cent)	3,300.00
3. State director, travel	900.00
4. Epidemiologist, travel	900.00
5. Stenographer, clerk	1,200.00
6. Contingent	500.00
7. State supervising nurse (Tuberculosis Association, $800; Red Cross, $800; state, $800)	2,400.00
8. State supervising nurse, traveling expenses	1,000.00
	$11,400.00

SOURCE OF FUNDS.

State	$4,400.00
International Health Board	4,400.00
Red Cross	1,800.00
Tuberculosis Association	800.00
	$11,400.00

COUNTY UNIT.

1. Salary of director	$3,000.00
2. Traveling expenses of director	720.00
3. Nurse, salary	1,800.00
4. Nurse, travel	600.00
5. Clerk	900.00
6. Contingent funds	480.00
	$7,500.00

SOURCE OF FUNDS.	*Each unit.*	*Six units.*
State	$1,250.00	$7,500.00
International Health Board	1,250.00	7,500.00
County	5,000.00	30,000.00
	$7,500.00	$45,000.00

VENEREAL-DISEASE DIVISION.

1. Director, salary	$3,600.00
2. Director, traveling expenses	900.00
3. Stenographer-clerk, salary	1,500.00
4. Arsphenamine	1,000.00
5. Contingent fund	500.00
	$7,500.00

SUMMARY.

	State.	*I. H. B.*	*County.*	*Total.*
Laboratory	$5,500.00	$5,500.00	....	$11,000.00
Venereal disease	7,500.00	....	....	7,500.00
County health work and epidemiology,	4,400.00	4,400.00	....	8,800.00
Total	$17,400.00	$9,900.00	....	$27,300.00
Six county units	7,500.00	7,500.00	$30,000.00	45,000.00
Grand total	$24,900.00	$17,400.00	$30,000.00	$72,300.00

GENERAL.

In general it can be stated that at the present time the state of the public health in Kansas, as contrasted with other years at the same season, is fairly satisfactory. There are no widespread epidemics, although unvaccinated people still continue to have smallpox, and there are several small outbreaks of typhoid fever, also among the unvaccinated.

At the last meeting of the State and Provincial Boards of Health of North America the following resolution was unanimously adopted, and, as the resolution provides, presented to the house of delegates of the American Medical Association:

WHEREAS, Economic and sociological conditions in the United States are causing the deprivation of many of our people, especially in rural districts, of sufficient and frequently of any medical service; and,

WHEREAS, The physical examination of five million of our young men during the war revealed that the present system of medical practice is inadequate for the detection, prevention or treatment of many diseases and physical defects which are causing inefficiency and unnecessary disease and suffering, leading to premature death, thus literally wasting millions of dollars annually; and

WHEREAS, This reckless waste of our American manhood and womanhood is due to insufficient education of physicians, nurses and others responsible for the public health, and therefore of the general public, in personal hygiene and preventive medicine, especially in the care of babies and children, and in the importance of systematic periodic examination of apparently well people for the purpose of the prevention or early correction of disease and defects; and,

WHEREAS, A few state medical organizations have hastily approved resolutions which confuse preventive medicine with health insurance, to which this organization is unalterably opposed; now, therefore, be it

Resolved, That the Conference of State and Provincial Health Authorities of North America—composed entirely of physicians, jealous of the reputation of the profession of whose history and achievements we are justly proud, since it has contributed so much towards every practical step in the reduction and prevention of disease—urges that the organized medical profession shall accept its responsibility for progress in the prevention of ill health and its causes, and shall support, through county and municipal medical societies, such diagnostic teaching and other clinics as will bring to all the people, whether living in the cities or in the country, all of the knowledge and means necessary to enable the members of every community, however remote from medical centers, to live through the years of their natural expectation with the utmost possible freedom from preventable and remediable disease and defects; and be it further

Resolved, That this resolution be presented to the American Medical Association with the request that its principles be approved, and that, through its great journal and its councils and other agencies, it exercise its responsibility for leadership in improving the education of the profession and the public in personal hygiene and preventive medicine.

This resolution, together with resolutions opposing so-called "state medicine," introduced by several other states, were substituted by the reference committee on legislation and public relations for a compromise resolution which was defeated in the house of delegates, and a resolution presented by Doctor Harris, of Chicago, adopted instead, which practically approves of all preventive measures relating to communicable diseases which may be provided by the state or the federal government.

The resolutions adopted by the Conference of State and Provincial Boards of Health are made a part of the secretary's report for the purpose of putting on record the unanimous opinion and approval of the health officers of North America in relation to a matter which promises to be of increasing importance, and, I regret to say, increasing bitterness in the discussion of the prerogatives of the state in regard to the control of disease and the promotion of the health of the people.

DIVISION OF COMMUNICABLE DISEASES AND SANITATION.

The personnel of this division has changed several times during the past two years, the chief of the division, Doctor Tuttle, severing his connection with the department in January. Upon urgent request, the International Health Board detailed Dr. A. J. Warren, field agent in rural sanitation, temporarily located in this state, to act as epidemiologist pending securing Doctor Tuttle's successor. While his successor has not yet been secured, although extended search has been made throughout the country, yet we trust that in a short time an epidemiologist may be found who will be satisfactory to the Board.

At the annual meeting of the State and Provincial Boards of Health of North America a resolution was unanimously adopted requesting the Surgeon General to create a registration area for morbidity statistics. With the installation of a new epidemiologist renewed effort will be made to bring our morbidity reports up to the highest per cent of reports possible, so that Kansas may without question be admitted into the registration area as soon as the Surgeon General creates this area. It will be of interest to you to know that Kansas' record on morbidity reports stands fairly high as compared with other states. In a paper presented to the conference by Dr. John S. Fulton, state health officer of Maryland, relating to this question, in which a comparative standing of the states, based upon an exhaustive record of morbidity reports of the states was made, Kansas had an average rank, giving us about the fifth from the top in the percentage of reports received. However, we are not satisfied with the fifth position, as the old adage tells us, "There is always room at the top."

The two great problems which confront this division at the present time are the problems of the control of typhoid fever and tuberculosis. Like the poor, these problems are always with us, so that they cease to excite comment or to arouse apprehension. Renewed activity should be put to the end that deaths from these preventable diseases may be reduced to a minimum. The department, through the division, is urging that campaigns for vaccination against typhoid fever be put on throughout the state. A number of communities have already responded, and I trust that before the season is far advanced many thousands of people will be added to those of our population who are already immune to typhoid fever.

DIVISION OF VITAL STATISTICS.

The personnel of this division has changed considerably during the past year. The division constantly finds itself handicapped by the restrictions placed by the legislature upon our ability to use sufficient clerical help to bring the work up to date and keep it so. We can only hope that the next legislature will give us immediate relief in this regard.

The state registrar will give a detailed report of the work of this division the past year.

DIVISION OF FOODS AND DRUGS.

The last legislature cut out one of our inspectors, the reason for the action not being stated. Arrangements relating to the work of the inspectors for the ensuing year have been made, which seem to be satisfactory to all parties concerned.

Grossly misbranded jams and jellies have appeared upon the market in large quantities of late, giving the department considerable concern as to the best method of handling the situation. However, satisfactory adjustments have been made looking toward the correction of the misbranding of these articles and at the same time affording protection to innocent purchasers, wholesale and retail, in this state.

The suit instituted against the Board by the Royal Baking Powder Company to enjoin the executive officer and the inspectors of this division from interfering with the sale of what appeared to the division and the laboratory workers to be grossly misbranded baking powder has finally been decided in the United States district court, the decision being, in effect, a victory for the state, the court attaching all the costs in the case to the baking-powder company. Thus the second case against this division has been won by the state.

As the season advances and the weather grows warmer, increasing complaints are received by the department as to the condition of eggs, the recent legislature having refused to pass the egg-candling law, and in addition thereto having removed one of our inspectors, the division finds itself unable to cope with the situation. There is fear that the respect relating to the quality of the Kansas egg which had been secured in eastern markets, and therefore satisfactory prices assured to producers of eggs in this state, will be seriously affected by the present conditions. It should be made clear that the fault does not lie with the division, but with the legislature.

Mr. Rowland, assistant chief food and drug inspector, will give a detailed report of the activities of this division.

DIVISION OF CHILD HYGIENE.

The activities of this division have been varied, among others having included the work of the health car, which is almost entirely devoted to child hygiene. One of the most significant features of the work of the division is the preparation of a correspondence course on the hygiene of childbearing. This course has proved to be an exceedingly popular one, the entire time of one clerk being taken up with keeping in touch with the 1,800 prospective mothers who have applied for the course of instruction.

The chief of this division has acted as executive secretary of the Children's Code Commission, concerning which, together with the activities of the division, she will make a detailed report.

DIVISION OF VENEREAL DISEASES.

As indicated in the opening paragraph of this report, the work of this division will be very largely curtailed during the coming year. The past year has seen a rather remarkable program of public-health education widely disseminated over the state, particularly among the high-school boys and girls. We are of the opinion that the program and methods of presenting the facts relating to personal hygiene, including so-called "social hygiene," to the potential young men and women of the state who are now in our various high schools, has been a campaign which met the situation very satisfactorily, as evidenced by the numerous testimonials from superintendents of schools and their repeated requests for a continuation of the work another year.

The work in the venereal-disease clinics established throughout the state has been highly satisfactory in the main. Our only regret is that we will be unable during the coming year to extend financial aid to them as we have in the past.

Doctor Kilbourne, chief of this division, will give a detailed account of the division's activities.

PUBLIC-HEALTH LABORATORY.

It was our misfortune to lose the splendid services of our former director of the laboratory, Dr. Kenneth F. Maxcy, but it has also been our good fortune to secure as his successor Dr. John J. Szymanski, who comes highly recommended, not only by Doctor Maxcy, but by Doctor Ferrell, of the International Health Board, and Colonel Russell, director of laboratories, United States army. Doctor Szymanski has had unusual laboratory training, both in this country and abroad, and in service in France as organizer of laboratories for the United States army. We recommend that his selection be confirmed.

The balance of the personnel of the laboratory for the ensuing year, under the joint agreement with the International Health Board, as stated in the proposed coöperative budget, is recommended for your approval.

In this revised and condensed budget it will be necessary to replace Miss Law, technician, by a young man who will be able to do the work in the laboratory as well as act as technician. Mr. Hunter, our present assistant technician, will act as technician in Miss Law's place until September 1, after which time we will secure his successor, as he wishes to enter the School of Medicine of the University of Kansas.

A more detailed report of the work of the laboratory during the past year will be submitted later by the assistant director.

DIVISION OF PUBLIC-HEALTH EDUCATION.

The work in this division has continued through the publication of our monthly bulletin, by lectures, by moving pictures, by posters, literature, press articles and by other work as exemplified through the activities of the various divisions, particularly through the use of the public-health car. There can be no doubt that in the years to come the seed that has been thus sown will bear abundant fruit in stronger and healthier bodies, in more vigorous lives, and therefore happier and more successful careers for the future citizens of this state.

FULL-TIME HEALTH ORGANIZATION.

There are at the present time five full-time county health organizations in the state and four full-time city health organizations. It is the desire to secure at least five additional full-time county health organizations, and to that end the International Health Board and the State Board of Health offers to aid counties that will put in full-time health organizations to the extent of $2,500 a year. A number of counties have shown their interest in the project, and we hope to have the entire number of counties secured before the end of the year.

In presenting this matter to the various counties the State Board of Health puts itself on record by statements such as follow, which is a copy of a letter sent to the Lyon county board of health, and which is put on record in the secretary's report as an expression of judgment as to why counties should provide for full-time health organizations:

Mr. J. E. Harris, JUNE 27, 1921.
Chairman, Lyon County Board of Health, Emporia, Kan.:

DEAR MR. HARRIS AND GENTLEMEN OF THE BOARD—The State Board of Health is very anxious to have Lyon county, together with the city of Emporia, provided with a full-time health organization. This desire is based upon the following facts:

1. Lyon county needs such an organization because its citizens are suffering every year from considerable disease that could be prevented, and a number of deaths occur in the county every year that, with the knowledge we now possess, ought and could be prevented. After a study of the reportable cases of sickness and the reported cases of deaths, I make this statement with the full consciousness of what it means and with the absolute certainty of ability to prevent considerable sickness and premature death that is now occurring in your county.

A second reason is that the whole state is interested in health conditions in Lyon county because of the location of two great colleges in your city. In my judgment the people of the state have a right to expect that their children whom they send to school there will have something nearly approaching adequate health supervision while away from their own sheltered homes.

A third reason is that the county and the city of Emporia are particularly and favorably located, both as to population and facilities, because of the location of these two schools and the new county hospital, to put on a rather remarkable demonstration of what a full-time health organization can do, which, coupled with the fact that for the next two years the state will share one-third of the burden, or rather, that the state will share in one-third of the investment in Lyon county for such work, ought to lend itself to a very prompt decision in the matter.

When the matter of a full-time health organization is presented to any community the only argument in opposition that you hear is the added expense incident to such an organization, with the unthinking statement that "we can't afford it." When we consider the matter of expense incident to the control of preventable disease we certainly must, if we are fair, consider the other side of the proposition as to what preventable disease is costing the community in question. While I have not undertaken a detailed and specific study of the cost of preventable disease in Lyon county, yet I undertake to make this statement with the full consciousness of my being able to substantiate it after an actual study has been made, that preventable disease is costing the citizens of your county one hundred fold more than the items of expense you are called upon to appropriate in order to meet the minimum budget under which a full-time health organization can operate in your county, namely, $7,500.

It will be seen, therefore, if this statement is true—and I challenge anyone to refute it—that the matter of expense resolves itself into a question of investment which will yield larger dividends, purely from an economic point of view, than any other sort of an investment that could be made. Then, who would undertake to put the price of a single human life beside the $5,000 the county is called upon to appropriate at this time? There is nothing more certain in the world than that human life can be saved by the application of well-known principles in the prevention of disease, and which are not now in operation in your county. The commissioners of the county and the city have a very weighty responsibility placed upon their shoulders in the decision of this question, for after all they are the guardians of the health of the people of the county and city.

The State Board of Health is sufficiently interested so that we are willing to share with your commissioners, not only in the financial responsibility, but will lend assistance in every possible way we can with the view of making this demonstration a success. The six counties we will be able to aid will soon be selected, and it is important that a decision be reached in the matter in the very near future.

With best regards, I am, sincerely, S. J. Crumbine, M. D., *Secretary.*

THE HEALTH CAR "WARREN."

I would like to have the Board's consent to permit the executive officer to use reasonable means and methods for securing money from outside sources to finance the operation and maintenance of the health car. I would, also, like to have their permission to use such unexpended moneys accruing in any of the funds of the department, which can be used for maintaining the health car and its personnel, the use of which funds in this way would have the consent of the state auditor.

If we are unsuccessful in securing six counties to put on full-time health organizations there will be a sum of accumulated money in that fund that might with profit be used to maintain the car.

Your approval of this matter will facilitate action in providing means and funds for the car's continuance.

Respectfully submitted,

S. J. Crumbine, M. D., *Secretary.*

Minutes of the Annual Meeting, 1921.

The annual meeting of the State Board of Health was held in the offices of the secretary, at Topeka, Kan., June 30, 1921.

Members of the Board present: Dr. W. M. Earnest, vice president, presiding; Doctors Axtell, Little, Entz, Lerrigo, Aldrich and Coburn. A quorum being present, the secretary read the minutes of the last quarterly meeting, which upon motion were approved and ordered placed on file.

The secretary then presented his annual report, after which the recommendations contained therein were freely discussed.

The joint budget between the Kansas State Board of Health and the International Health Board was unanimously approved, and the thanks of the State

Board of Health was extended to the International Health Board for their timely assistance rendered the public-health work of Kansas.

Upon motion, the executive officer was instructed to use whatever surplus funds might possibly be used to continue the maintenance and operation of the public-health car.

Upon motion, the report of the secretary as a whole was unanimously approved and adopted and ordered to be placed on file.

After a very free and frank discussion the executive officer was instructed to communicate with the Washington office of the American Red Cross relative to the joint appointment of and financial responsibility for a state supervising nurse.

Upon motion, the selection of Dr. John J. Szymanski as director of the Public Health Laboratories was confirmed.

Mr. Latchaw, representing a mausoleum construction company, made a statement to the Board concerning action taken by the Board at its last quarterly meeting in its refusal to formally approve of a mausoleum already erected at Wichita and one under construction at Augusta, the law requiring that the approval of the State Board of Health shall be made, following the presentation of detailed plans and specifications, before the work of constructing a mausoleum is started. After an extended discussion and review of the whole situation the Board refused, by unanimous vote, to reconsider its former action.

Doctor Lerrigo presented the following resolution, which upon motion was unanimously adopted:

> The state legislature at its last session having authorized the employment of a statistician in the Division of Vital Statistics, the State Board of Health rules that in the absence of the state registrar said statistician shall be in charge of the Division of Vital Statistics, subject to the instruction of the secretary of the State Board of Health.

The engineer of the State Board of Health then made his annual report, which upon motion was received and ordered to be placed on file.

The engineer presented tentative regulations for the sanitary supervision and control of swimming pools, which rules are designed to prevent the spread and dissemination of communicable diseases among the people of the state, whereupon the engineer and secretary were instructed to make such revisions as will meet the situation in Kansas and comply with the laws in relation thereto, the same to be submitted by mail to the members of the Board for final approval and adoption.

Doctor Warren then presented the annual report of the Division of Communicable Diseases and Sanitation, which upon motion was received and ordered placed on file.

The state registrar then presented the annual report for the Division of Vital Statistics. This upon motion was received and ordered placed on file.

The assistant chief food and drug inspector made the annual report for the Division of Foods and Drugs. Mr. Watson made report for the food laboratory and Professor Long for the drug laboratory at the University of Kansas, and Professor DeRose for the food laboratory at the State Agricultural College, all of which, upon motion, were received and ordered to be placed on file.

Doctor Sherbon made the annual report for the Division of Child Hygiene, which upon motion was received and ordered placed on file.

Doctor Kilbourne made the annual report for the Division of Venereal Diseases, which upon motion was received and ordered placed on file.

Doctor Kilbourne also made the regular report for the Public Health Laboratory, in the absence of the director, which upon motion was received and ordered placed on file.

Mr. Rowland made report for the standards committee. After some discussion, a committee composed of Mr. Egan, Mr. Rowland and the executive officer was appointed to report at the next quarterly meeting on the revised ice-cream standards, which should include, if the committee thought wise, a maximum bacterial content standard.

Upon motion, the vice president appointed a committee composed of Doctors Lerrigo, Coburn and Crumbine to transmit a letter of appreciation and thanks to the chancellor of the University for the fine spirit of coöperation shown by the University in the work of the divisions of water and sewage and foods and drugs.

Upon motion, part 6 of the Laws, Rules and Regulations of the State Board of Health, relating to public health, being the "regulations for the control of infectious, contagious and communicable diseases dangerous to the public health through the means of common carriers engaged in the transportation of passengers or property within the state," was amended as follows:

Rule 34, "Toilets in dining cars," was amended to read as follows:

RULE 34. *Lavatories in dining cars.* A lavatory shall be provided in all dining cars for the use of dining-car employees, and the same shall be supplied with soap and clean towels and shall be kept in a clean and sanitary condition. Such lavatory shall have no direct connection with the kitchen, pantry or other place where food is prepared. The word "dining car" as used in these regulations shall be held to include all cars in which food is prepared and served.

Rule 35, "Toilets in cars," was amended to read as follows:

RULE 35. *Toilet in cars.* A proper toilet room and lavatory shall be provided in all railway passenger cars for the use of their occupants. Such toilet shall be supplied with toilet paper, soap, and free or pay clean towels, and shall be kept in a clean and sanitary condition: *Provided,* That cars used exclusively in suburban service are not required to be so equipped.

Rule 42 was amended to read as follows:

RULE 42. *Garbage.* Garbage cans in sufficient number and with suitable tight-fitting covers shall be provided in dining cars to care for all refuse food and other wastes; and such wastes shall not be thrown from the car along the right of way within the limits of cities, towns or villages, or within drainage areas furnishing domestic water supplies.

These amended rules, namely rules Nos. 34, 35 and 42, were unanimously approved, all the members present voting in the affirmative. Upon motion, the original rules Nos. 34, 35 and 42 were repealed.

Upon motion, the amended regulations were ordered to be printed in the official state paper.

The election of officers then took place, with the following result: President, Dr. H. L. Aldrich, Caney; vice president, Dr. W. M. Earnest, Washington.

Upon motion, the advisory board, conferees and present chiefs of divisions were reëlected for the ensuing year.

The following bills were audited and allowed:

Dr. J. J. Entz	$18.85
Dr. W. M. Earnest	18.63
Dr. Clay E. Coburn	8.92
Dr. J. T. Axtell	21.45
Dr. H. L. Aldrich	22.70
Dr. Belle B. Little	9.60

No further business appearing, upon motion the Board adjourned.

S. J. Crumbine, M. D., *Secretary.*

FIRST QUARTERLY MEETING, 1921.

Held in the Office of the Secretary, Topeka, Kan., October 5 and 6, 1921.

Report of the Secretary.

Members of the State Board of Health—Greeting:

Since the annual meeting in June the state has been comparatively free from epidemics of any great extent or seriousness in character. There have been several typhoid outbreaks, the origin of which seemed to be certain infected milk supplies. Search was immediately made for the carrier individual, which effort was crowned with success in at least one instance, and the proper remedial measures applied, and as would naturally be expected, the epidemic subsided. Diphtheria, which was so widely prevalent last year, threatens to become even more prevalent this year. With the well-established methods for determining clinical and carrier cases, and the ease with which susceptible individuals can be found with the Schick test, it is becoming increasingly evident that communities may rid themselves of the menace of diphtheria through the employment of full-time health workers whose primary business it is to prevent disease rather than to suppress it after its occurrence.

With that end in view, and in order that county boards of health might be persuaded to provide for full-time health work, the following letter was sent to boards of county commissioners:

To the Board of County Commissioners: JULY 2, 1921.

DEAR MR. CHAIRMAN—We have a business proposition to which we hope your Board will give its earnest consideration. It is not only a business proposition, but it is one that concerns the life and health of the people whom you represent. May I call your attention to the fact that according to the laws of the state the county boards of commissioners are also the county boards of health and are charged with the duty of establishing those conditions that will favor life and health.

The State Board of Health is anxious to aid and assist in any way possible the boards of health of the counties of Kansas in fulfilling their obligations to their people. Consequently the State Board of Health has been fortunate in securing funds enough to give financial aid to six counties in the state in developing a full-time county health organization. These six counties are to be demonstration counties for the purpose of demonstrating to the people of the county and the whole state the advantages of and the necessity for well-organized and efficient county health departments.

The first six counties applying to the State Board of Health will be the benefactors of these demonstrations. To the first six we offer the sum of $2,500, or one-third of the total amount required to furnish to the people of the average county adequate protection against diseases and premature death.

For further information write to the secretary of the State Board of Health.

Yours very truly, S. J. CRUMBINE, *Secretary.*

Up to the present time only three counties have availed themselves of state and International Health Board aid in putting on a full-time county health demonstration. It is hoped that the other three counties will be secured within a short time.

MORBIDITY REGISTRATION AREA.

On July 12 the following circular letter was sent to the health officers of Kansas:

To the Health Officers of Kansas: JULY 12, 1921.

Subject: Morbidity Registration Area:

At the annual conference of state health officers with the Surgeon General of the U. S. P. H. S., a motion was unanimously adopted requesting the Surgeon General to create a registration area for morbidity statistics. No doubt this request will be approved and a "registration area" created within the present year.

Every loyal Kansan would feel humiliated if Kansas were denied admittance to the registration area because of incomplete reports of communicable diseases by physicians and householders of the state.

In order that reports of reportable cases of sickness may be more complete and prompt and that health officers and the public may know what counties and cities are making a successful effort to comply with the law requiring reports of certain communicable diseases, the State Board of Health will establish a morbidity registration area for the state by counties and cities of the first class, and publish the list from time to time.

Accordingly, all health officers are requested to transmit this information to the physicians in their jurisdiction, by circular letter, and to the public through the press, urging doctors to promptly report all cases, and householders to report such cases where a physician is not in attendance in reportable cases of sickness.

Let's see to it that Kansas is not only admitted to the area for morbidity reports, but that she stands well up toward the head of the list of states admitted.

Fraternally,

S. J. CRUMBINE, M. D., *Secretary and Executive Officer.*

The final tabulation as to which counties and cities are entitled to admission into the registration area has not yet been completed, but it is hoped by the time of the next quarterly meeting that a statement of the cities and counties selected to form the nucleus of a new registration area will be announced.

Early in June Doctor Sherbon resigned her position as chief of the Division of Child Hygiene. The members of the Board were notified by mail of her resignation, and permission was asked to proceed to secure her successor without unnecessary delay. Accordingly, every member of the Board conferred upon the secretary the authority so to do, and negotiations are proceeding with that end in view, but we find it a difficult task to secure the services of a woman physician who is at all comparable with or in the same class with Doctor Sherbon.

On August 1, Dr. John J. Szymanski submitted to the executive officer his resignation as director of the Public Health Laboratory, to become effective August 10, which resignation was promptly accepted. Immediate steps were taken to secure his successor, and upon recommendation of our former director, Doctor Maxcy, and of Professor Sherwood, of the department of bacteriology of the University of Kansas (the latter giving a favorable report following a personal interview, as requested, with the party under consideration) the services of William Levin, doctor of public health, were secured as director of the Public Health Laboratory. Doctor Levin assumed charge of the laboratory September 1.

WATER AND SEWAGE.

The condition of the Iola water supply being of such a character as to constantly leave a doubt as to its wholesomeness or safety, the chief engineer and your secretary, acting under the authority of the water and sewage law, thought it wise to recommend to the Board the issuance of an order on the city of Iola to improve the quality of their water supply. Accordingly, the mayor and commissioners have been cited to come before the Board at this meeting to show reason why an order should not thus issue.

The increased water consumption in the cities of Lawrence and Topeka has outgrown the available supply of water from the former source of supply, namely, the wells on the banks of the river at points in the river bed. Accordingly, permission has been granted to the cities of Lawrence and Topeka to use the waters of the Kaw river as their source of supply, the same to be properly filtered by such means and methods as would receive the approval of the Division of Water and Sewage. The city of Lawrence has already completed its new water-purification plant, and has been for some time using water from the Kaw river. The city of Topeka is now constructing its new plant, and will within a few months be securing its chief supply from the same source. It becomes necessary, therefore, for the Board to give careful consideration to the matter of the pollution of the Kaw river and its tributaries by the discharging into those streams of untreated sewage from municipalities located thereon. Accordingly, the mayors and commissioners or the mayors and councils of the municipalities situated upon the Kaw river and its tributaries have been notified that a hearing will be held at this time and place, whereby they will be given an opportunity to show reason, if any, why an order should not issue against said municipalities to require them to treat their domestic sewage before being discharged into the natural waters of the state. The use of the Kaw river as a source of water supply makes it necessary that the State Board of Health reconsider its policy of granting permission to municipalities on this river and its tributaries to discharge untreated sewage into the natural waters of the state.

CHANGE IN REGULATION.

It is respectfully recommended by the executive officer, the epidemiologist concurring therein, that the disease of diarrhea and enteritis be included in the list of reportable diseases, as listed in rule 1, group 1, found on page 34 of the Rules and Regulations, pamphlet issue of 1919.

It is respectfully recommended that rule 17, found on page 42 of the 1919 edition of the Rules and Regulations, be changed by striking out the word "fumigation" in line 1 and the first word "and" in line 2.

It is further recommended that rule 18, on page 42 of the above-mentioned pamphlet, be amended by adding the words "or suspected" in line 1 after the word "known," and adding the words "or suspected carriers" in line 10 after the word "carrier."

REVISION OF STANDARDS.

The committee on standards has several suggestions to make concerning the revision of the standards of several food products.

In the latter part of August the daily press contained information that seven children had died from what was reported to be ptomaine poisoning from ice cream. While the responsibility for the supervision of the manufacture of ice cream seems to be chiefly centered in the State Dairy Commission, yet there were not sufficient facts in the newspaper article to indicate where the responsibility might rest. Accordingly, I requested the assistant chief food and drug inspector, Mr. Rowland, to proceed to Osborne and make an investigation. Mr. Rowland's report of the investigation is a very careful and painstaking summary of his work, both at Osborne and at Concordia, where the ice cream was made. The investigation would seem to indicate that the fault was with the Beatrice Company at Concordia. Therefore, a copy of the report of the investigation was sent to the State Dairy Commissioner at Manhattan and a copy to the main office of the Beatrice Creamery Company at Topeka.

The incident is herein recorded that the members of the Board may be advised that the department is using every reasonable effort and precaution to safeguard the lives and health of the people in so far as its authorities will permit. Respectfully submitted,

S. J. Crumbine, M.D., *Executive Officer.*

Minutes of the First Quarterly Meeting, 1921.

The first quarterly meeting of the State Board of Health was held in the office of the secretary, at Topeka, October 5 and 6, 1921. Upon roll call the following members were present: Dr. H. L. Aldrich, president, presiding; Dr. O. D. Walker, Dr. C. E. Coburn, Dr. B. Belle Little, Dr. C. H. Ewing, Dr. C. H. Lerrigo, Dr. J. J. Entz, and Judge J. G. Egan, attorney for the Board.

A quorum being present, the secretary stated that the authorities of the city of Iola had been requested to meet with the Board to show reason, if any, why an order should not be issued against the city of Iola to improve the source or change the treatment of their municipal water supply.

After presentation of the matter by the engineer for the Board, a statement by the mayor and attorney for the city of Iola, a thorough discussion of all the factors involved in the situation, it was agreed by those representing the city of Iola that they would proceed without unnecessary delay to make certain improvements in their settling basins and in the treatment of the water, that would more certainly insure a more wholesome domestic supply for the city, and that in the not distant future the city would proceed to prepare plans for building a modern filtration plant. This attitude on behalf of the city authorities of Iola being satisfactory to the State Board of Health, it was not thought necessary to issue the contemplated order.

The secretary then made a statement concerning the proposed change of policy of the State Board of Health in relation to the pollution of the Kansas river and its tributaries by the discharge of untreated sewage into the stream, such change of policy being thought to be necessary for the reason that the city of Lawrence is now using the Kansas river as the source of domestic water supply and the city of Topeka is about to use this river as the source of domestic water supply, thus the purity of the water of this river should be preserved. Accordingly, upon notice of the secretary, representatives of the following cities were present at the meeting of the board: Topeka, Wamego, Manhattan, Junction City, Concordia, Glasco, Minneapolis, Beloit, Abilene, Salina, Chapman, Ellsworth, Clyde, Clay Center.

The secretary made a statement as to the apparent necessity for the change of the policy of the Board, and the chief engineer then entered somewhat into a detailed presentation of the problem, which indicated that the preliminary survey of the Kansas river and its tributaries had shown that the waters of the stream were carrying an excessive load of pollution, and that therefore the Board was justified in taking steps to safeguard the purity of the waters of the state. After an extended discussion of the subject, in which most of the representatives of the above-named municipalities took part, it was agreed that further investigation of the pollution of the Kansas river and its tributaries should be made, and that before the State Board of Health should issue an order on any of the cities above enumerated they should be given an opportunity for a hearing.

It was thought that the presentation of the problem and discussion of the question from its various angles was productive of benefit, particularly to the extent that the municipalities were advised of the responsibility which each must share in the protection of the Kansas river and its tributaries from dangerous and overloading pollution.

After the representatives of these municipalities had left the meeting the secretary read the minutes of the annual meeting held in June, whereupon the minutes were approved and ordered placed on file. The secretary then read his quarterly report, after which his recommendations were taken up for discussion. Upon motion, the rules and regulations of the State Board of Health for the control of communicable diseases were amended as follows:

Part I, rule 1, group 1, was amended by adding to the group of communicable diseases those required to be designated as reportable diseases, the disease "diarrhea enteritis (under two years)."

Rule XVII was amended by striking out the word "fumigation" in the first line and the word "and" in the second line.

Rule XVIII was amended to read as follows:

Isolation and quarantine of carriers. Any person who is known to harbor, or who there is reasonable grounds for believing harbors, the bacilli, virus or infective agent of any communicable disease, even though manifesting no symptoms of such disease, is hereby declared to be a carrier and a menace to the public health, and the name and address of such person shall be reported immediately to the local city or county health officer in whose district such person resides. The local health officer shall immediately investigate and report to the State Board of Health. Pending receipt of instructions from the State Board of Health, the local health officer shall isolate or quarantine such person, if in his judgment the danger to the community necessitates such action. In the event of any such person leaving the jurisdiction of a local health authority, the State Board of Health shall be notified by the local health officer of the name of such person and his destination.

By unanimous vote the Board authorized the secretary to request the Surgeon General of the United States Public Health Service to assign a sanitary engineer of the service to coöperate and collaborate in making a survey of the Kansas river and its tributaries in relation to the pollution of those streams. Upon motion, the Board recessed until 9 a.m. October 6.

Thursday morning, October 6, a quorum of the Board being present, the standing committees were called upon for report.

The standards committee made a report of progress and announced they would present to the Board at its next quarterly meeting certain proposed changes in the food standards of certain food products.

The mayor and city attorney of the city of Olathe being present the secretary made a statement and the engineer described somewhat in detail the nuisance that the city was creating and maintaining by discharging the untreated sewage of the city into a stream which at certain seasons of the year was totally or almost totally dry. After presentation of their side of the problem by the city authorities and an extended discussion by the members of the Board, it was finally agreed that the Board would grant permission to the city of Olathe to discharge untreated sewage into the natural waters of the state for a period not to exceed two years, and gave notice to the city authorities present that such permission would not be renewed, the city authorities making it known that they understood that such action meant that they would be required to have a sewage-treatment plant by the expiration of the two-year period. Accordingly, they pledged themselves to the problem of proceeding with plans looking toward the submission of the matter to the people, to which means bonds would be voted for building a sewage-treatment plant.

The following bills were then audited and allowed:

Dr. H. L. Aldrich	$25.55
Dr. O. D. Walker	29.58
Dr. C. E. Coburn	9.72
Dr. B. Belle Little	20.03
Dr. C. H. Ewing	20.75
Dr. J. J. Entz	24.35
Prof. E. H. S. Bailey	3.36
Prof. L. E. Sayre	3.20
Floyd Tilford	20.97

No further business appearing, the Board, upon motion, adjourned.

S. J. Crumbine, M.D., *Secretary.*

SECOND QUARTERLY MEETING, 1922.

Held in the Office of the Secretary, Topeka, Kan., January 30, 1922.

Report of the Secretary.

Members of the State Board of Health—Greeting:

Since the last quarterly meeting of the Board, held October 5 and 6, 1921, at which your attention was called to the fact that diphtheria threatened to become a state-wide epidemic, I have to report that this fear became a tragic reality, in that we have suffered from an epidemic more widely spread and with greater numbers of people infected with diphtheria than at any other like period within the history of the state. Fortunately, the epidemic was rather mild in character, the case fatality being extremely low, which, of course, is due in part to the mildness of the epidemic, and more particularly to the prompt and timely use of diphtheria antitoxin. The prevalence of the epidemic was made the basis of a state-wide campaign to encourage the immunization of all susceptible school children with the use of toxin-antitoxin. In many communities in the state diphtheria antitoxin immunization was very extensively practiced, and in one county, Wabaunsee, the county board of health ordered the health officer to proceed to accomplish the immunization of all the school children in the county, the Board in part providing the funds to purchase toxin-antitoxin to supplement a considerable amount supplied by the State Board of Health.

We have been informed that approximately 99 per cent of the school children of Wabaunsee county have been inoculated with the toxin-antitoxin, and are, therefore, presumably immunized against diphtheria. It will be of interest to note the prevalence of diphtheria in Wabaunsee county during the next few years. In quite a number of school districts throughout the state similar action was taken, so that it is altogether likely that the susceptible children to diphtheria among our school population has been very greatly reduced, not only because of the wide prevalence of the disease but by artificial immunization. Several biological houses are planning to put on a state-wide intensive campaign to further carry out the work so auspiciously begun by the State Department of Health.

Smallpox has been rather widely prevalent throughout the eastern geographical third of the state, a malignant type of the disease appearing in Kansas City, Kan., and at certain points in Johnson, Anderson, Allen and Neosho counties. This malignant type of the disease was all traced to Kansas City, Mo., where a very widespread and exceedingly malignant type of the disease prevailed, with a mortality approximately 33 per cent.

On November 23 the following letter was sent to all the county and city health officers:

November 23, 1921.

Dear Doctor—During the past few weeks there have been reported 240 cases of smallpox in Kansas City, Mo. Of these 81 have died, making a percentage mortality of 34. It is un-

> likely, of course, that all the cases have been reported, but these figures indicate that an unusually severe type of the disease has made its appearance in Kansas City.
>
> In view of the rather intimate contact Kansas City has with other parts of Kansas, it is likely that cases of smallpox of a malignant type will soon occur throughout the state unless immediate measures are taken to prevent this. The only really efficient preventive measure, as you know, is vaccination. I urge you, therefore, to make this state of affairs as widely public as possible in your district. Write an article to your newspaper or send a letter to the other physicians and encourage as many people as you can to be vaccinated.
>
> The very existence of smallpox is a reflection upon our modern civilization, since we have such a sure means of controlling it. Will you please, therefore, give this matter your very careful attention?
>
> Yours very truly,
>
> S. J. Crumbine, M. D.,
> *Collaborating Epidemiologist, U. S. P. H. S.*

As a result of this epidemic, which has not yet entirely subsided, smallpox vaccination throughout the state was carried on in unprecedented numbers. It is believed that a conservative estimate of the number of persons vaccinated during the past six months may be placed at 250,000. While in Washington recently I was told by a distinguished member of the United States Public Health Service that they have been expecting a virulent outbreak and widely disseminated epidemic of smallpox in the Middle West for a considerable time, because it was generally known, or at least generally believed, that large numbers of persons in the Central West were unvaccinated. Therefore it did not take a prophet to predict that sooner or later the fatal blow would fall.

I have secured the loan of a moving-picture film, which is designed to be of educational value in promoting and fostering favorable public opinion for vaccination against smallpox. It is designed to show this film in the principal centers of population throughout the state.

From October 30 to November 5 there was observed at many places throughout the state what the American Society for the Control of Cancer has designated as "cancer week." Your executive officer, acting as chairman of the State Medical Society's committee on health and public instruction, made an effort to secure the coöperation of local county medical societies in furthering the program of cancer week. Probably fifteen county medical societies coöperated in this program, and several of the larger cities, operating through the local health department, observed cancer week by holding a public meeting. Probably 40,000 pieces of literature pertaining to the menace of cancer were distributed. Incidentally, cancer week revealed one of the state's most gifted surgeons to be a public-health orator of unusual value. Reports from several places where he gave public lectures were superlative in their praise of the high quality of the work of this man, who is not only prominent in the profession of this state, but is a member of the State Board of Health.

The International Health Board, coöperating with the International Rotary Clubs, put on a health program during the so-called "health week," December 5 to 11, inclusive. Upon request, Governor Allen issued the following proclamation:

> The state of Kansas justly enjoys the reputation of being a healthful place in which to live. Compared with the registration area of the United States, its mortality rate is excessive only in deaths from senility. But to maintain this high standing, citizens must constantly give attention to the maintenance of hygienic methods of living and must teach and preach the doctrine of a sane and sensible observance of health regulations.
>
> The International Association of Rotary Clubs suggests that everywhere a week of special attention to health observances be given to the end that tuberculosis and other such diseases

shall be suppressed, and old and young alike shall increase their enjoyment of the priceless boon of health, that state of physical, mental and moral equilibrium which manifests a normal functioning of body, mind and soul.

Therefore, I, Henry J. Allen, governor of Kansas, do proclaim a health week for Kansas, beginning with December 5 and continuing to and including December 11, which latter date shall be observed in Kansas as "Health Sunday." And I do further call upon educators, physicians, clergymen and public-spirited citizens everywhere to give especial attention to spreading abroad the gospel of good health during this special week, and to neglect no opportunity to support all measures that our State Department of Health may suggest.

Just how much good these so-called "health weeks" accomplish is, of course, impossible to estimate, and it may be said that very little immediate results may be noted. Nevertheless, the constant reiteration of matters relating to personal and public health must leave its impress upon the public mind, and thus gradually become of increasing public concern. Recently the Metropolitan Life Insurance Company issued a bulletin which gave us the first authentic information as to the result of periodical physical examinations, representing a group of 6,000 people, covering a period of five and one-half years. The net results of these periodical examinations was a reduction in the expected mortality of the group of 28 per cent, and of course a corresponding saving to the company because of premiums that continued to be paid rather than the termination of life policies by payment of death claims. It seems to me that this new data, available for the first time, should be widely used in our health-week propaganda, to the end that the people generally may accept the dictum and form the habit of regularly going to their family physician for physical examination to detect incipient disease.

On the first of January Dr. Helen A. Moore assumed her duties as chief of the Division of Child Hygiene. It is respectfully recommended that her appointment be confirmed.

The department has received notice from the chief of the Children's Bureau of the United States Department of Labor that the so-called Sheppard-Towner bill has become a law, and requesting that the State Board of Health submit a plan of coöperation with the federal government on infant and maternal hygiene, which if approved by the Board created under the act for that purpose would serve as a basis of allotment of certain moneys to be appropriated by congress to the Division of Child Hygiene of the State Board of Health, to be used in the work of infant and maternal hygiene. The Bureau, in a letter to the governor, requested him to accept, on behalf of the state of Kansas, the provisions of the act until the next legislature meets. It is my understanding that the governor has so accepted, and I therefore recommend that your executive officer be authorized to submit to the Children's Bureau of the United States Department of Labor a plan of coöperation for carrying out the purposes and provisions of the act.

The executive committee of the state and provincial health authorities expects to meet in Washington some time early in March, and one of the matters to come up for discussion at their meeting relates to plans that the states will adopt in complying with the provisions of the Sheppard-Towner bill. In view of the above statement your executive officer has not made an effort to finally work out a plan, although in a general way it would seem that the work of the Division of Child Hygiene as already conducted would simply need to be enlarged in extent with the additional provision of three or four public-health nurses. It is thought, too, that a part of the program should be to restore the itinerary of the public-health car, devoting it entirely to child and maternal hygiene work, including mothers' conferences and children's clinics, instructing mothers how to keep infants well. It is recommended that the executive officer present such a plan.

It is understood at the very outset that no attempt must be made, either by the medical staff of this department or by public-health nurses over which we have control, to in any way prescribe for or treat disease.

On January 16 the following letter was sent to the Secretary of Agriculture:

JANUARY 16, 1922.

Hon. Henry C. Wallace, Secretary of Agriculture, Washington, D. C.:

SIR—Upon your request, I am confirming what I had the honor to express to you in person in your office at Washington on the 7th inst.

I have to say that the Division of Foods and Drugs of the Kansas State Board of Health recently issued the following tentative ruling on vinegar which is made from the evaporated peels and cores of apples:

"Pending a decision of the United States courts in the question of the branding of vinegar made from such evaporated apple products as cores, peels and chops, this department tentatively suggests the following branding for such vinegar: 'Apple Vinegar Made from Evaporated Apple Products,' or 'Evaporated Apple Products Vinegar,' the whole phrase to be the name of the product, and of clear, uniform, legible type."

This action was thought to be made necessary because:

First. Account of certain economic conditions that prevail in the Middle West at the present time, namely, the almost complete failure of the apple crop of 1921, and therefore the necessity of either abandoning the industry of vinegar making, in which large sums were invested in the Central West, or of utilizing and conserving what frequently hitherto has been largely a waste from the apple-canning establishments, after such waste has been preserved by drying or evaporation.

Second. Because the State Board of Health believes the making of vinegar from the evaporated peels and cores of selected apples will make a better sanitary product than vinegar made from the expressed juice of all kinds of apples gathered from the orchard, which include windfalls, wormy, and in many instances decayed or partly decayed apples. A decayed apple cannot be successfully dried by evaporation, nor will worms and worm debris lend itself to such treatment; hence vinegar made from evaporated apple products must, from its very nature, be more sanitary in quality, and hence more wholesome than vinegar made from the juice of miscellaneous, unselected apple stock.

The laws of Kansas will not permit the vinegar made from evaporated apple products to be labeled "Apple Cider Vinegar," but requires, in general terms, that the product must be named for or after the material from which it is made—hence our ruling.

Respectfully, S. J. CRUMBINE, M. D.,
Secretary and Chief Food and Drug Inspector.

It is recommended that the tentative ruling made by the Division of Foods and Drugs be approved.

On January 5 the secretary attended the annual meeting of the National Health Council at Washington, and at the annual election of officers he was elected recording secretary for the council. He considers it a great privilege and honor to have the opportunity of speaking in the "councils of the high," to discuss and have a part in the promotion of the great public-health movements that are challenging the attention of the civilized countries of the earth.

Agreeable to instruction from the State Board of Health at the last quarterly meeting, the secretary communicated with the United States Public Health Service to secure the appointment of a sanitary engineer to assist the State Board of Health in making a sanitary survey of the waters of the Kansas river. Accordingly, the surgeon general appointed a sanitary engineer from the Service, who made a preliminary survey of the Kansas river, and in a written report recommended a line of procedure which confirmed the opinion of our own Division of Water and Sewage as the most economical and advantageous way to secure the necessary data on the pollution of the Kansas river. Accordingly, our engineer and his assistant are making such a survey, which cannot, of course, be completed for some months to come. Our engineer will, no doubt, report somewhat in detail the progress of the work, including certain situations at Pittsburg and Salina, to which your attention should be invited.

In the week of April 11 to 15, inclusive, in conjunction with the United States Public Health Service, the State Board of Health will hold its Annual School for Health Officers and Public Health Nurses, which has been merged into an Institute for Public Health, and which will include the adjoining states of Missouri, Iowa, Nebraska and Oklahoma. We trust that as many of the members as possible will attend this institute.

Respectfully submitted,
S. J. CRUMBINE, M.D., *Secretary.*

Minutes of the Second Quarterly Meeting, 1922.

The second quarterly meeting of the State Board of Health was convened in the office of the secretary at Topeka, Kan., at 11 o'clock a.m., Monday, January 30, 1922. On roll call all the members of the Board were present, Doctor Aldrich, president, presiding.

The minutes of the last quarterly meeting were read and approved.

The secretary then presented his quarterly report, after which the recommendations contained therein were taken up for consideration.

Upon motion, the appointment of Dr. Helen A. Moore as chief of the Division of Child Hygiene was confirmed.

The executive officer was authorized, upon unanimous affirmative motion, to present plans to the Maternity Board, under the so-called Sheppard-Towner act, for the conduct of the Division of Child Hygiene in its coöperation with the federal government in relation to the provisions of the said Sheppard-Towner bill.

Upon motion, the report was received, approved and ordered placed on file.

The standards committee then made its report, whereupon regulation 11(*d*) was amended to read as follows:

> Eggs from cold storage of more than thirty days, or which have been packed in any preserving substance, shall be designated as storage or preserved eggs, and the wholesale or retail package shall bear a label showing them to be storage or preserved eggs, as the case may be.

Upon motion, the following tentative regulation was adopted concerning vinegar made from evaporated apple products:

> Pending a decision of the United States courts in the question of the branding of vinegar made from such evaporated apple products as cores, peels and chops, this department tentatively suggests the following branding for such vinegar: "Apple Vinegar Made from Evaporated Apple Products," or "Evaporated Apple Products Vinegar," the whole phrase to be the name of the product, and of clear, uniform, legible type."

Upon motion, the butter-fat content of ice cream, the standard for ice cream, was reduced to ten (10) per cent, so that the revised standards will read as follows:

REGULATION 35.

1. ANIMAL PRODUCTS.

B. MILK AND ITS PRODUCTS.

(*f*) *Ice Cream.*

(Taking the place of paragraphs 1, 2 and 3.)

1. *Ice Cream* is the frozen product made from cream and sugar, with or without flavoring, and contains not less than ten per cent (10%) of milk fat.

A spirited discussion then took place concerning regulation 6, paragraph B, division 1, in relation to compound syrup. The brief submitted by the attorneys for the Corn Products Manufacturing Company was discussed at length, and upon motion further discussion was postponed until the next quarterly meeting of the Board.

Upon motion, the following tomato standards were adopted, all the members of the Board voting in the affirmative on each one of the above-mentioned amended standards:

REGULATION 35.

II. VEGETABLE PRODUCTS.

B. FRUITS AND VEGETABLES.

(*b*) *Vegetables and Vegetable Products.*

3. (*g*) *Strained Tomatoes* is the product obtained by straining sound, ripe tomatoes, raw or cooked, through a screen that removes skins and seeds.

(*h*) *Tomato Paste* is strained tomatoes concentrated by evaporation, with or without the addition of salt, with or without the addition of basil leaf (*Ocimum basilicum* L.), with or without the addition of pure sodium carbonate or of sodium bicarbonate to neutralize a portion of the acidity, and contains not less than twenty per cent (20%) of tomato solids determined by drying *in vacuo* at 70° C.

(*i*) *Concentrated Tomato Paste* is strained tomatoes concentrated by evaporation, with or without the addition of salt, with or without the addition of basil leaf, with or without the addition of pure sodium carbonate or of sodium bicarbonate to neutralize a portion of the acidity, and contains not less than thirty per cent (30%) of tomato solids determined by drying *in vacuo* at 70° C.

(*j*) *Strained Tomatoes from Trimming Stock* is the product obtained by straining sound peelings, trimmings and pieces from ripe tomatoes through a screen that removes skins and seeds.

(*k*) *Tomato Paste from Trimming Stock* is strained tomatoes from trimming stock concentrated by evaporation, with or without the addition of salt, with or without the addition of basil leaf, with or without the addition of pure sodium carbonate or sodium bicarbonate to neutralize a portion of the acidity, and contains not less than twenty per cent (20%) of tomato solids determined by drying *in vacuo* at 70° C.

(*l*) *Concentrated Tomato Paste from Trimming Stock* is strained tomatoes from trimming stock concentrated by evaporation, with or without the addition of salt, with or without the addition of basil leaf, with or without the addition of pure carbonate or of sodium bicarbonate to neutralize a portion of the acidity, and contains not less than thirty per cent (30%) of tomato solids, determined by drying *in vacuo* at 70° C.

Under the heading of "Unfinished business," Judge Egan, attorney for the Board, made a statement concerning the condition of the Pittsburg sewage. Upon motion, it was ordered that the next quarterly meeting of the State Board of Health be held in the city of Pittsburg, where the members of the Board might have the opportunity of a personal investigation of the sewage conditions of that city.

The executive officer was authorized to notify the city authorities of the city of Pittsburg of the date and place of the next meeting of the State Board of Health, and to cite the city authorities to show reason, if any, why an order should not issue against the city of Pittsburg for them to cease to discharge untreated sewage into the natural waters of the state.

The chief engineer then made a statement concerning the sewage conditions of the city of Salina, and after an extended discussion, the following order was issued:

> WHEREAS, The city of Salina is discharging untreated sewage from their sewer system into the Smoky Hill river; and
>
> WHEREAS, Repeated investigations made by the Division of Water and Sewage of the State Board of Health has shown that the discharging of untreated sewage into the Smoky Hill river has created a serious nuisance, which is believed to be dangerous and a menace to the public health; and
>
> WHEREAS, The permit of the State Board of Health to discharge sewage into the waters of the state has expired; and
>
> WHEREAS, The city of Salina is desirous of making extensions to its sewer system and has made application for a permit to construct the same and to discharge untreated sewage into the Smoky Hill river: Therefore, by virtue of the authority vested in the State Board of Health under the laws of the State of Kansas,
>
> *It is hereby ordered,* That the city of Salina discontinue discharging untreated sewage into the waters of the state on and after January 1, 1924.

The engineer notified the Board as to the neglect of the city of Emporia to obey the order of the State Board of Health in relation to the discharge of untreated sewage into the natural waters of the state, and the executive officer was authorized to notify the city officials of Emporia to proceed without unnecessary delay to obey the order of the State Board of Health to cease to pollute the natural waters of the state by the discharge of untreated sewage into a stream that is used as a source of public water supply by cities lower down on the watercourse.

The engineer presented the petition of the Mausoleum Manufacturing Company for the construction of mausoleums in this state, which the Board tentatively approved, pending the filing of specific plans and specifications of each individual mausoleum that would be constructed.

No further business appearing, the Board upon motion adjourned.

The following bills were audited and allowed:

Dr. H. L. Aldrich	$26.20
Dr. W. M. Earnest	20.45
Dr. Clay E. Coburn	9.66
Dr. O. D. Walker	24.58
Dr. J. T. Axtell	22.88
Dr. C. H. Ewing	28.06
Dr. J. J. Entz	15.54
Dr. Belle B. Little	10.87
Prof. L. E. Sayre	3.55
Robert D. Rose, *Chemist*	6.47
J. F. Tilford, *Conferee*	21.99

Respectfully submitted,

S. J. CRUMBINE, M.D., *Secretary.*

THIRD QUARTERLY MEETING, 1922.

Held in the City of Pittsburg, Kan., Wednesday, April 26, 1922.

Report of the Secretary.

WATER AND SEWAGE.

To the Members of the State Board of Health—Greeting:

Agreeable to action taken by the Board at its last quarterly meeting, we have met in the city of Pittsburg to view the condition alleged to exist in the natural waters of the state by reason of the discharge of untreated sewage by the city of Pittsburg into the natural waters of the state. Complaint has come to the State Board of Health for a number of years that the discharge of untreated sewage has created an intolerable nuisance in Cow creek, and that the water has been rendered unfit for stock purposes, is foul, disagreeable, and a menace to the public health. The executive officer has notified the mayor and commissioners of Pittsburg to appear before the Board to show reasons, if any, why an order should not issue against the city of Pittsburg to cease to discharge untreated sewage into the natural waters of the state, for the above reasons.

DIVISION OF FOODS AND DRUGS.

Repeated outbreaks of botulinus poisoning throughout the country, the result of improperly sterilized and infected vegetables of various kinds, both home canned and commercially canned, has led to considerable apprehension as to how best to prevent further fatalities from this very malignant infection. The most recent botulinus poisoning, which resulted in five deaths, occurred in a hospital in Indiana from infected canned spinach. Several shipments of this same lot had been sent to Kansas, whereupon as soon as the facts were known immediate steps were taken to investigate if any stocks were left on hand and to secure samples for analysis. It was found that most of these shipments had been disposed of to the retail trade, and in the most part had been consumed without untoward results. It was thought best, however, to warn wholesale dealers of the situation, and accordingly the following circular was sent to the wholesale grocers of Kansas:

MARCH 22, 1922.

To Wholesale Grocers:

During the past few years there seems to have been an increasing number of outbreaks of so-called botulinus poisoning in various parts of the country, some due to commercial canning and some due to home canning. More recently most of the cases have been traced to canned spinach, the last outbreak occurring a short time ago in Indiana.

It is supposed that canned goods infected with the botulinus organism gives evidence of the contamination by *swelling.*

In order that we may minimize the possibilities of death from this virulent type of food poisoning in Kansas, it is respectfully suggested that you have an inspection made of your canned goods, particularly canned spinach, in so far as that is possible, removing all cans that show any evidence of spoilage, and sending samples to us for examination in our laboratories.

Your traveling salesmen could be of the greatest assistance in this investigation if they would call the retail merchant's attention to the matter, to the end that his stock is likewise gone over and swells removed.

Your prompt and sympathetic coöperation in this regard will be highly appreciated, and will be rendering a real public service.

Sincerely,
S. J. Crumbine, M. D., *Secretary.*

PUBLIC-HEALTH NURSING.

According to your instructions, the executive officer has secured the services, as state supervisor of public-health nursing, of Miss Hulda A. Cron, of Cleveland, Ohio. She began her duties on April 14. Miss Cron comes very highly recommended, both by the chief of the nursing service of the American Red Cross at Washington and by former state commissioner of health, Dr. Allen Freeman, of Ohio, under whom she served as director of public-health nursing for three and a half years. I am looking forward to the reorganization of public-health nursing in Kansas in a very hopeful fashion, as I believe it means increased efficiency and united effort in carrying out some of the more pressing problems relating to maternal and infant hygiene. I am fully of the belief that Miss Cron will justify all the complimentary advance notices which I have received concerning her.

DIVISION OF CHILD HYGIENE.

In accordance with your instructions and after a personal conference with the Maternity Board, created under the provisions of the Sheppard-Towner act, I have submitted the following plan to the board, which is designed to be a basis of operation under the terms of the Sheppard-Towner act, and which I trust will meet with your approval. The allotment to the Division of Child Hygiene from April 1 until June 30 of this year will be $8,991.51.

The plan follows:

Topeka, Kan., March 22, 1922.

The Board of Maternity and Infant Hygiene,
Care of the Children's Bureau, Department of Labor, Washington, D. C.:

Dear Miss Abbott—I am submitting herewith, for your approval, plans of work for our Division of Child Hygiene under the terms of the Sheppard-Towner act. As a preliminary statement, I desire to say that no radical changes are contemplated from our present activities, but rather an enlargement and a more intensive work of the division. Our present work might be briefly summarized as follows:

First.—*Education.* This consists in:

(*a*) The distribution of our printed literature and letters relating to various phases of prenatal instruction, including the proper hygiene of maternity and the care of the baby and child up to school age, but more particularly the first two years of life.

(*b*) Public addresses to various types and groups of people, particularly to mothers and expectant mothers.

(*c*) The use of movie-picture films and stereopticon slides, through a loan library to public health workers and nurses, or used direct by the members of the staff.

(*d*) The use of exhibits, posters, etc.

Second.—*The Public Health Car "Warren,"* through which means we endeavor to accomplish the following:

(*a*) Meet the people, particularly the mothers of the community to which the car goes, in order that we may discuss with them, in a personal manner, their problems relating to maternity and infancy.

(*b*) Afford opportunity to the entire community to see the exhibit in the car and hear the lectures by the accompanying staff.

(*c*) Coöperation with the school authorities, through which means the entire school has an opportunity to visit the car, by classes, after which every pupil is required to write an essay on the meaning and value of the things he saw and heard on the health car. This might be called our "rubbing in" process.

(*d*) Hold mothers' conferences and children's clinics, and if possible to organize some permanent sort of an organization, under local or community supervision, through which means clinics, conferences and lectures may be featured at stated periods.

THIRD.—*Study of Maternity and Infant Mortality:*

(*a*) Already a start has been made in a study of the cause of 1,200 stillbirths occurring in Kansas last year.

(*b*) In the city of Topeka and Shawnee county, which is the department's headquarters, an intensive study will be made of the cause of all infant and maternal deaths, and the cause of all stillbirths occurring in this area in 1922. This study will be in coöperation, if possible, with the attending physician, securing blood samples of the mother in the case of a stillbirth for Wasserman tests, and such other means as seem to be necessary to make a complete and intensive study of these matters for the unit including the city of Topeka, with a population of approximately 55,000, and of Shawnee county, the rural community immediately surrounding the city, with a rural population of 12,000.

FOURTH.—*Miscellaneous:*

(*a*) It is designed to make an intensive campaign for the purpose of increasing birth registration. This work will be carried on by the Division of Vital Statistics and the Division of Child Hygiene working in coöperation, special emphasis being placed upon the availability of field public-health nurses in the work of birth registration. Counties and municipalities in the state which do not show what is considered a normal birth registration will be carefully checked by a representative of the Division of Vital Statistics.

(*b*) A very careful grading and inspection of children's homes and maternity hospitals has been made, and will continue to be made under the provision of a state law which provides that such inspection shall be made by the Division of Child Hygiene of the State Board of Health, and licenses are only issued when certain minimum requirements are met.

(*c*) Continuation of the policy of providing one per cent solution of silver nitrate to the midwives and physicians of the state, with, we trust, increasing efficiency in the prevention of opthalmia neonatorum.

(*d*) We plan to secure a prominent pediatrician to address the various medical societies, to the end that the medical profession may be advised of the latest word in the feeding of infants and infant care in general.

The above, as enumerated, constitute our different activities, which will simply be enlarged and intensified.

ADDITIONAL PERSONNEL.

We contemplate enlarging and intensifying the work by adding at least four district public-health nurses, trained in maternity and infant hygiene, who will organize the work of the state by utilizing and training the county and municipal public-health nurses already in the field, there being 130-odd public-health nurses working in Kansas at the present time—all of this work to be done under the supervision of our state supervising nurse. This will add, together with a clerk for our state supervising nurse, a personnel of six to our present force.

Arrangements will be made, and in fact have already been made in part, to work closely in coöperation with local municipal public-health associations and with the State Tuberculosis Association, in so far as their work applies to infancy hygiene, including the formation of Little Mothers' Leagues.

The above plans are submitted for your consideration. An itemized budget will follow upon notification from your board that federal funds are available.

Respectfully submitted, S. J. CRUMBINE, M. D., *Secretary.*

ANNUAL SCHOOL FOR HEALTH OFFICERS AND PUBLIC-HEALTH NURSES.

The annual School for Health Officers and Public Health Nurses, which this year was combined with the Public Health Institute, under the joint auspices of the United States Public Health Service and the Kansas State Board of Health, was held the week of April 10 to 15, inclusive, at Kansas City, Kan. This institute reached the high-water mark of all of our annual schools which have been held for the past twelve years. This was largely due to the fact that the personnel of the school was extended to include the states of Missouri, Iowa, Nebraska, Oklahoma and Kansas, although there were few in attendance from other states than Kansas and Missouri. The interest of those in attendance was especially marked. Promptness and lack of confusion characterized the meeting, and the members of the faculty put on an exceptionally high-class program. The total registration was 478, and it is estimated that perhaps ten per cent failed to register. It is fair to assume that something over 500 people were in attendance at part of or all of the sessions.

A classification of those in attendance follows:

Kansas health officers	39
Out-of-state health officers	18
Kansas doctors, not including health officers or faculty	26
Out-of-state doctors	13
Kansas nurses	84
Out-of-state nurses	75
Miscellaneous (Kansas) including club women, teachers, students, etc.	87
Miscellaneous (out of state)	53
Social workers (Kansas)	9
Social workers (out of state)	28
Faculty	31
Laboratory section	15
Total	478
Estimated 10 per cent failed to register	47
	525

States represented: Kansas, 259; Missouri, 177; Colorado, 1; Illinois, 1; Connecticut, 1; District of Columbia, 1; New York, 1; Arkansas, 1; Nebraska, 1; Oklahoma, 3; South Dakota, 1.

MORBIDITY REGISTRATION AREA.

Ten years ago, at a meeting of the state health authorities with the Surgeon General, your executive officer ventured to suggest to the Surgeon General the advisability of providing a registration area for morbidity reports that might be comparable in its general provisions and import to that of the registration area for deaths and the registration area for births. The suggestion was quite generally indorsed by the various state health officers in attendance at this particular conference, but up to the present time it has never been put into actual operation. At the last meeting with the Surgeon General a committee was appointed to formulate plans and a system of grading looking toward the establishment of a registration area for morbidity reports, and I have no doubt but that such an area will be established in the near future.

Anticipating the action of the Surgeon General, and particularly in view of the fact that your executive officer originally proposed this morbidity registration area, he was extremely anxious that Kansas might be admitted as a sort of charter member when the area was created, and in order to stimulate more prompt reports of reportable diseases it was thought that it would be a good plan to create a registration area by counties and cities of the first class in Kansas. Accordingly, announcement was made to that effect a year and a half ago, and certain cities and counties admitted tentatively into the area conditioned upon a review of their reports for the year 1921. The tentative list is as follows:

Cities: Topeka, Wichita, Kansas City.

Counties: Cherokee, Geary, Sumner, Cowley.

Upon completion of the morbidity reports for 1921 the morbidity registration area was permanently adopted, and the following counties and cities of the first class were admitted:

First-class cities: Leavenworth, Hutchinson, Wichita, Topeka.

Counties: Butler, Cowley, Geary, Jefferson, Osborne, Seward, Shawnee, Sumner.

We believe this will create a wholesome rivalry between counties and cities, and will also be more or less of a reproach upon those health officers whose districts have not yet been admitted into this new registration area.

Respectfully submitted, S. J. CRUMBINE, M. D., *Secretary.*

Minutes of the Third Quarterly Meeting, 1922.

The State Board of Health met in their regular third quarterly session at the Hotel Stilwell, Pittsburg, Kan., Wednesday, April 26, the session opening at 2 p. m. Upon roll call the following members of the Board were present: Dr. H. L. Aldrich, president, presiding; and Doctors Lerrigo, Coburn, Hawley, Walker, Axtell, Ewing and Entz. Mr. Albert H. Jewell, chief engineer of the State Board of Health, was also present, together with the executive secretary.

A quorum being present, the secretary read the minutes of the last quarterly meeting, which upon motion were approved and ordered placed on file.

Dr. J. C. Montgomery, county health officer of Cherokee county, then presented an invitation to the Board to visit Cherokee county and Columbus, as matters of importance in relation to the sewage of the city of Columbus should be presented to the State Board of Health for their action. Accordingly, upon motion, the Board voted to go to Columbus the following day. The report of the secretary was then read, and upon motion was approved.

A report including definite approval of plans submitted to the Maternity Board, outlining plan of coöperation between the Division of Child Hygiene and the federal government under the provisions of the Sheppard-Towner act, was approved, all members of the Board voting in the affirmative.

The matter of the delinquency of Dr. W. T. Courtright, county health officer of Chautauqua county, was brought up for consideration, the Board authorizing the president to visit Doctor Courtright to see if his delinquency could be adjusted. If such adjustment was not affected by the time of the next meeting, the executive officer was authorized to invite Doctor Courtright to appear before the Board to show reasons, if any, why he should not be removed from office in accordance with the laws of the state.

The question of the pollution of the natural waters of the state in relation to the discharge of Pittsburg sewage and industrial waste into Cow creek then came up for hearing. Representatives of the city of Pittsburg and representatives of farmers and others owning property on Cow creek were heard, together with a statement from our engineer, Mr. Jewell; whereupon it was moved that the Board should go into executive session for consideration of the evidence given at the hearing. After full and complete discussion, the following resolution was upon motion unanimously adopted, and copies of the same ordered to be sent to the mayor and commissioners of Pittsburg and to the Hull & Dillon Packing Plant of Pittsburg:

The State Board of Health in regular quarterly session in Pittsburg, Kan., April 26, 1922, after a hearing from all parties interested in the polluted condition of Cow creek, unanimously adopted the following resolution:

> WHEREAS, The city of Pittsburg, Kan., is a rapidly growing city of great industrial and educational importance, in which the entire state has a justifiable interest and pride; and
>
> WHEREAS, The city authorities have indicated their desire and purpose to serve the best interests of the people of the city and surrounding community; and
>
> WHEREAS, The city is discharging untreated sewage into the natural waters of the state in amounts and kinds as to constitute a local nuisance in Cow creek and a potential danger to the health of the citizens of the surrounding community: therefore, be it
>
> *Resolved,* That the State Board of Health recommend that the mayor and commissioners take such steps as are necessary to abate the said local nuisance and potential danger to the public health at the earliest date possible; and be it further
>
> *Resolved,* That the State Board of Health, recognizing the overloaded condition of Cow creek from domestic sewage and industrial wastes, should not grant any further permission for sewer extensions, which would further increase the amount of sewage being discharged into the natural waters of the state, until some acceptable form of sewage treatment has been provided.

Upon motion, the president appointed a committee, consisting of Doctors Lerrigo and Crumbine and Mr. Jewell, to confer with the mayor and city commissioners of the city of Topeka concerning the potential dangers of sewage-laden waters backing into the lowland along the Kaw river in the city of Topeka, and urging upon the city authorities the early installation of some sort of a device to prevent the backing of flood waters into the city sewers and the installation of necessary machinery for pumping Topeka sewage from the sewers when the flood gates were closed.

Upon motion, the Board recessed until Thursday, April 27, to meet in the city of Columbus, Thursday, April 27.

On Thursday, April 27, at 10:30 a.m., the Board met in the office of Dr. J. C. Montgomery, county health officer, Cherokee county, a quorum being present. The appointment of Miss Hulda Cron, as state supervisor of public-health nursing, was unanimously confirmed; also the appointment of Mr. Paul Fox as assistant engineer of the State Board of Health was unanimously confirmed.

The secretary was authorized to write a letter of appreciation to the chancellor of the University and the dean of the School of Engineering for the three days' school held at the University for water and sewage superintendents and supervisors.

The Board then visited, in company with the city officials, the sewage-treatment plant of the city of Columbus, after which our engineer, Mr. Jewell, made certain recommendations as to betterments and cleaning, and the hope was expressed that no delay would be occasioned in putting into effect the engineer's recommendations.

No further business appearing, the Board, upon motion, adjourned.

The following bills were audited and allowed:

Dr. J. T. Axtell	$32.91
Dr. C. H. Lerrigo	36.52
Dr. J. J. Entz	37.30
Dr. O. D. Walker	65.41
Dr. C. H. Ewing	36.10
Dr. J. W. Hawley	58.93
Dr. C. E. Coburn	26.01
Dr. H. L. Aldrich	22.23

Respectfully submitted, S. J. CRUMBINE, *Secretary.*

ANNUAL MEETING, 1922.

Held in the Office of the Secretary, Topeka, Kan., June 29, 1922.

Report of the Secretary.

THE YEAR THAT HAS PASSED.

To the Members of the State Board of Health—Greeting:

It is a matter for congratulation that, despite our handicap in the lack of funds, progress in the work of the department can be reported. The routine work of the several divisions has gone forward in an orderly and fairly efficient fashion. New and emergency problems have received such immediate attention as our limited personnel and financial resources would permit. There has been no undue prevalence of disease during the past year, with the exception of the unusual prevalence of diphtheria and in Kansas City, Kan., a malignant type of smallpox.

The mortality as expressed in the death rate for the state as a whole has again registered at a surprisingly low figure, being 10.2 per thousand population for 1921.

THE DIVISION OF COMMUNICABLE DISEASES AND SANITATION.

The full-time county health work carried on by the director of this division has steadily progressed despite the universal tendency to cut down expense wherever possible and the insistent agitation of organizations to eliminate the full-time health officer and public-health nurse. At the present time there are eight full-time county health organizations, four of which are receiving aid from the state and the International Health Board. It was the hope of the department that at least six counties would have been secured by this time under the state-aid plan, but we should not and really do not feel discouraged because of failure in this matter, for any progress under the present conditions must be considered favorable and cause for congratulation.

The year 1921 recorded a new rate for tuberculosis mortality in this state, the death rate from tuberculosis, all forms, being 43.4 per 100,000. The division is making renewed efforts to see that the requirements of the tuberculosis notification law are literally and completely carried out.

The low rate of mortality from typhoid fever reached two years ago has again been repeated, which is exceedingly gratifying. There are epidemiological reasons for believing that the typhoid fever prevalent in Kansas during the past two years has been entirely due to food or milk infection from carrier cases or fly infection. Water-borne typhoid fever in Kansas seems to be about a thing of the past. At all events, no water-borne epidemic typhoid fever has occurred in Kansas for a number of years, and if due vigilance and supervision are carried out by the local authorities in safeguarding their water supplies in accordance with instructions from our Division of Water and Sewage, the likelihood of a water-borne epidemic is becoming increasingly remote.

The number of deaths from the malignant types of smallpox prevalent in Kansas City, and from there scattered to a few other eastern Kansas communities, but illustrates anew the oft-repeated dictum that it is the unvaccinated who die from smallpox.

Among the unlooked-for events that retarded the work of this division was the exhaustion of our diphtheritic antitoxin fund early in January of this year, and thus for six months the division has been unable to furnish to the indigent poor of the state diphtheria antitoxin and typhoid vaccines, as we have been accustomed to do. The unprecedented epidemic of diphtheria was the chief occasion for the exhaustion of this fund.

The work of the Public Health Laboratory, which for the present is included in the Division of Communicable Diseases and Sanitation, has been very fruitful and strenuous. We most sincerely express our gratitude to the International Health Board for their financial aid in conducting the Public Health Laboratory, without which we would have been obliged to abandon the work before the year was half up.

The chief of this division and the director of the laboratory will give detailed reports of their work for the past year.

THE DIVISION OF VITAL STATISTICS.

No unusual matters have happened in this division during the past year except the resignation of the former state registrar, Dr. C. H. Lerrigo.

With the decrease of marriages in Kansas registered the past year and the year before, it is becoming painfully evident that if the work of the division is to carry forward and the records be kept up to date, additional funds will have to be provided, either through an increase in the central registration marriage-license fee, or by direct appropriation by the legislature. It is respectfully suggested that the Board recommend to the legislature an increase in the marriage-license fee from fifty cents to one dollar. It is believed the additional twenty-five cents in the marriage-license fee will not be burdensome, and will at the same time provide the division with adequate funds to carry on the work properly and expeditiously.

THE DIVISION OF WATER AND SEWAGE.

The work of this division has gone forward with intelligent industry and much work has been accomplished. Perhaps the outstanding new feature is the undertaking of making a sanitary survey of the source and degree of pollution of the Kansas river and its tributaries. This will probably occupy about a year or more before the work is completed, after which reliable data as to the degree and kind of pollution of the Kansas river and its tributaries will be available. As in the case of the antitoxin fund, the division found its funds exhausted before the end of the year. The trips of our engineers throughout the state can only be made upon their expenses being paid by the municipalities wanting their services. This, in a way, restricts our work to those asking for service rather than permitting us to make investigations upon our own volition where there are reasons for making such investigations. The last legislature cut the fund for this division from $5,000 to $3,000, which has very greatly hampered and crippled the work. It is recommended that the Board request the legislature to restore the fund for this division to what it had been for many years, *i. e.*, $5,000 a year.

The chief engineer will give a detailed report of the work of the division.

THE DIVISION OF FOOD AND DRUGS.

The work of this division has proceeded in much the same fashion as in former years. Perhaps the most important work of the division for the past year has been the summer egg campaign, which included the circularization of all buyers of eggs, urging prompt and efficient candling; the inspection and recommendation for seizure of tree-frost oranges arriving at terminal points in this state from California; a survey made for possible botulinus bacillus in spoiled canned foods, such as spinach; and more lately a milk survey of the larger cities of the state which do not have milk inspection, carried out in coöperation with the Public Health Laboratory.

The assistant chief food and drug inspector will give a detailed report of the work of this division.

THE DIVISION OF CHILD HYGIENE.

The work of this division is being rapidly increased and enlarged through the funds received under the Sheppard-Towner act. The plan of coöperation approved by the Board at its last quarterly meeting was submitted to the Board of Maternity and Infant Hygiene at Washington and approved by them, and the first allotment from the Sheppard-Towner fund, amounting to $8,991.51 has been received. Two supervising field nurses have been employed, their salaries being paid from this fund, and an additional nurse will be employed as soon as a suitable person can be located.

It is planned, also, to secure a permanent pediatritian to hold consultation clinics with the membership of the various county medical societies with which arrangements can be made. Correspondence along that line is now being carried forward, and we have reason to hope that the services of Dr. Borden S. Veeder, perhaps the leading pediatrician of St. Louis, and formerly in charge of that department at Washington University, can be secured.

Intensive studies in relation to the increase in infant and maternal mortality in selected communities is being undertaken, with the hope that they may lead to securing valuable data. Mothers' conferences and well-baby clinics are being held in conjunction with the work of the health car "Warren," which has been on the road since early spring and will be continued this fall with increasing earnestness and zeal.

The chief of the division will give a detailed report of the work for the past year.

THE DIVISION OF VENEREAL DISEASES.

The work of this division has gone forward in much the same fashion as last year. There is increasing evidence that educational work among the high-school students, given separately by a trained man and a trained woman, is exceedingly beneficial, and it is our hope that this work may be continued without interruption another year.

The chief of the division is carrying on an educational campaign through the use of illustrated lectures and moving pictures to county medical societies and to lay audiences. There is a constant demand for literature from this division, and the distribution of arsphenamine to the indigent poor of the state and to clinics continues about as it did last year.

The chief of the division will give a detailed report of the work of the division.

DIVISION OF PUBLIC HEALTH EDUCATION.

As indicated in former reports, it is the public-health educational work of the State Board of Health that in the long run proves the most useful weapon to combat disease and ignorance, and more and more it is the purpose of the different division chiefs to feature their work before the people by getting out in the field in order to reach communities through the living voice as well as the distribution of literature from the department's headquarters.

The monthly *Bulletin* seems to be growing in appreciation by most of the people. One of the gratifying features about its publication is the fact that it is being used to a constantly increasing extent by the public schools of the state as a text in their work.

We now have something like one dozen moving-picture films and a large number of stereopticon slides that are available to any health officer or public-health worker in Kansas, under certain stipulated conditions, upon request.

THE DIVISION OF PUBLIC HEALTH NURSING.

Several years ago the Board by resolution authorized the executive officer to appoint a state supervisor of public-health nursing, who would be attached to the Division of Communicable Diseases and Sanitation. I have now to recommend that a new division of the Board's work be created, to be known as "the Division of Public Health Nursing," and that the chief of this division be the state supervisor of public-health nursing. The reason for this recommendation lies in the fact that public-health nursing is becoming to be highly specialized, and includes all forms of nursing service, such as tuberculosis nursing, school nursing, venereal-disease clinic nursing service, county health nursing, maternity and infant nursing, emergency and first-aid visiting service, etc. In other words, public-health nursing service as it is now understood cannot relate itself to any one division of the Board's work; indeed, for the present, and probably for several years to come, the greatest emphasis will be laid upon nursing service connected with maternal and infant hygiene, and on account of the new impetus given that work by the Sheppard-Towner act, if the public-health nursing service is put in a division by itself it will be in better position to serve any other division of the state department's activities without in any way interfering with any other division. This seems to be the trend of organization in the progressive states in the country, and I therefore recommend that this new division be created by resolution of the Board, and that Miss Hulda A. Cron, the present state supervisor of public-health nursing, be named as chief of the division. Miss Cron will give a detailed report of the public-health nursing service since she has been in that field in Kansas.

THE OUTLOOK.

The outlook for public-health work for the future is indeed promising from the standpoint of things that ought to be done and that could be done in view of our present knowledge, but the outlook, from our ability to do the things necessary to be done and that could be done because of our knowledge, is not so promising on account of the widespread movement of retrenchment that is going on everywhere. Unfortunately, the people as a whole have not yet learned to differentiate between the huge expense for sickness and premature and unnecessary death, which seems to be paid with readiness, while the comparatively small outlay necessary to prevent much sickness and premature death, and which, therefore, would be an investment of the very highest order, is always grudgingly paid.

Whatever action the next legislature may see fit to take in relation to these matters will, of course, be accepted with such philosophy as we are able to muster, doing the best we can with whatever meager funds may be appropriated. When we compare the appropriations that most other progressive states have for conducting their state departments of health, the Kansas appropriations seem pitiably small. May we not hope, however, that it will never again be necessary for this department to apply to any outside agency for funds to carry on the state's business rather than suffer such irreparable loss as the closing of our Public Health Laboratory would entail to the sick people of the state. The secretary again wishes to express his very great appreciation to the International Health Board for its timely succor in a financial way when it seemed that much of the most important part of the State Department of Health work would have to be sacrificed for a period of two years. It is recommended that the executive officer be authorized to negotiate with the International Health Board for a continuation of their appropriation for carrying on our work for the coming year, or until the legislature meets and provides the necessary appropriations to conduct the work of the department.

Respectfully submitted,

S. J. Crumbine, M. D.,
Secretary and Executive Officer.

Minutes of the Annual Meeting, 1922.

The annual meeting of the Kansas State Board of Health was held in the offices of the secretary, at Topeka, Thursday, June 29, 1922, the session opening at 11 o'clock a. m. Upon roll call the following members were present: Dr. H. L. Aldrich, president; Dr. W. M. Earnest, Dr. J. J. Entz, Dr. J. T. Axtell, Dr. C. H. Ewing, Dr. J. E Hawley, Dr. Clay E. Coburn, Dr. C. H. Lerrigo, Dr. O. D. Walker.

The usual order of procedure was varied to allow Doctor Kilbourne, chief of the Division of Venereal Diseases, to give his annual report, that he might be permitted to make an outgoing train. Upon motion, his report was received and ordered placed on file.

The report of the secretary followed, whereupon the recommendations contained therein were taken up for discussion.

Upon motion, the Board agreed to recommend to the next legislature that the marriage-license fee be amended to provide for an increase of the central marriage registration fee from fifty cents to one dollar, in order that adequate funds might be provided for the conduct of the Central Division of Vital Statistics. At this point a motion was made and seconded that a legislative committee of three be appointed to present to the incoming governor and members of the legislature the needs and requirements of the State Board of Health. The president appointed the following committee; Doctors Axtell, Walker and Crumbine.

A motion was then made that a new Division of Public Health Nursing be created to meet the increasing demands and needs of the State Board of Health, and that the present state supervisor of public-health nursing, Miss Hulda A. Cron, be appointed as chief of this division. On vote the motion was carried unanimously.

Upon motion, duly seconded, the secretary was authorized to negotiate with the International Health Board for financial aid to the department the coming year for carrying on the work of the State Board of Health under the conditions that obtained during the past year.

The reports of standing committees were then called for. The standards committee had no report to make.

The reports of special committees were then in order. The special committee appointed to confer with Dr. W. T. Courtwright, county health officer of Chautauqua county, concerning his former delinquencies, reported that the interview with Doctor Courtwright had brought about results, and that he was making his reports to the department in a fairly satisfactory manner.

The report of the Division of Vital Statistics was then given by the ex-state registrar, Dr. C. H. Lerrigo, and upon motion was received and ordered placed on file.

The secretary expressed his high appreciation of Doctor Lerrigo's services and his personal loss in accepting his resignation as state registrar. Various members of the Board cited the resignation of Doctor Lerrigo as an illustration of the need of more adequately financing the Division of Vital Statistics and the need of securing a better salary for the state registrar if the services of a high-class physician for that position is to be secured. The hope was expressed by all the members of the Board that Doctor Lerrigo would be continued as a member of the State Board of Health for many years to come, which might, in a small way, mitigate the personal loss of his services as state registrar. Doctor Lerrigo thereupon expressed his thanks to all the members of the Board for their kind words of appreciation.

At 12:10 the Board recessed until 1:30 p. m.

At 1:30 p. m. the Board reassembled, Dr. H. L. Aldrich, the president, presiding, with all the members of the Board present except Judge Egan, the attorney.

The report of the Division of Communicable Diseases and Sanitation was given by the chief, Dr. A. J. Warren, and by the epidemiologist, Dr. Frank G. Pedley, whereupon the report was received and ordered placed on file.

The report of the Division of Foods and Drugs was then given by Mr. F. E. Rowland, which was received and ordered placed on file.

Doctor Crumbine called attention to the war-time chloroform, put up in tins, that had recently been sold by the War Department and put upon the market, most of which was badly deteriorated; also to the result of recent experimental feeding tests of so-called vitamin products sold upon the market, as being almost and in some instances entirely inert.

The report of the Division of Water and Sewage was then given by the chief engineer, Mr. A. H. Jewell, which upon motion was received and placed on file.

The report of the Division of Child Hygiene was then given by Dr. Helen A. Moore, chief of the division, which was received and placed on file.

Discussion was then made as to the milk campaign conducted by the Division of Foods and Drugs, the director of the Public Health Laboratory and the Division of Child Hygiene now being carried on in the state. This work was commended by the members of the Board.

The report of the Public Health Laboratory was then read by Dr. A. J. Warren, and upon motion was received and ordered placed on file.

Upon motion, which was unanimously carried, it was recommended that the executive officer and the director of the Public Health Laboratory be authorized to certify the work of certain medical laboratories which come up to definite standards of equipment, efficiency and methods.

The secretary then introduced Miss Hulda A. Cron to the Board, whereupon she gave a verbal report of her activities and plans for future work in the Division of Public Health Nursing.

NEW BUSINESS.

The secretary presented the matter of an "understanding" between the Kansas State Board of Health and the Southwestern Division of the American Red Cross, such as was definitely presented in the memorandum presented to the Board.

Doctor Lerrigo called the attention of the Board to the date of the annual meeting of the Kansas Conference of Social Work, and suggested that the next quarterly meeting of the Board be held in the city of Wichita on Monday, September 18. On motion, the suggested date and place of meeting was unanimously adopted.

The annual election of officers then took place, resulting as follows: President, Dr. J. E. Hawley; vice president, Dr. J. J. Entz.

Upon motion, the chiefs of the divisions and other elective personnel of the State Board of Health were reëlected for the ensuing year.

At four o'clock the members of the Board were taken in automobiles to the new Topeka filtration plant, which was given a careful and interesting inspection by the Board. Upon return to the offices of the secretary, a vote of thanks was extended to the chief engineer for the opportunity of viewing this fine plant.

No other business appearing, upon motion the Board adjourned.

The following bills were audited and allowed:

Dr. H. L. Aldrich	$25.35
Dr. W. M. Earnest	18.49
Dr. J. J. Entz	15.92
Dr. J. T. Axtell	21.99
Dr. C. H. Ewing	25.94
Dr. J. E. Hawley	28.62
Dr. Clay E. Coburn	9.60
Dr. C. H. Lerrigo	5.60
Dr. O. D. Walker	19.48
A. H. Jewell	2.65
J. F. Tilford	23.21

Respectfully submitted, S. J. Crumbine, M.D.,
Secretary and State Executive Officer.

DIVISION REPORTS.

DIVISION OF COMMUNICABLE DISEASES AND SANITATION.

Annual Report, 1921.

Since your last annual meeting four occurrences of unusual interest have taken place.

DIPHTHERIA.

During the year there has been a rather sharp increase in the number of cases of diphtheria reported to the division. For the year ending June 30, 1920, there were reported 2,206 cases, while for the year ending June 30, 1921, there were reported 4,976 cases—an increase of more than 100 per cent. A portion of this increase might be accounted for by improved case reporting, but the increase shown in the reporting of the other reportable diseases does not justify this conclusion, unless we assume that as a result of the improved facilities for making a diagnosis, through the State Public Health Laboratory, more mild cases have been recognized than heretofore. In support of this argument the mortality statistics for this period should not show a corresponding increase, due to the recognition of the mild cases and also to the early recognition and the early administration of antitoxin. While accurate mortality statistics are not yet available, I think it safe to say that the mortality statistics will not show the same increase as the morbidity. The increased and early use of diphtheria antitoxin is due, to a great extent, to the fact that through the efforts of the State Board of Health the product is now available in every county and every city of any size in the state. It has been carried to the people. For this the Board deserves the highest commendation.

SMALLPOX.

During the period covered by this report there has also been a decided increase in the number of cases of smallpox reported. During the year ending June 30, 1920, there were reported 3,543 cases, while for the year ending June 30, 1921, there was a total of 5,067 cases. The increase is the result of a wanton disregard which has developed during the few past years relative to this measure of prevention.

If Geary county, in which is located Junction City, can be ragarded as typical of the conditions found in the rural districts and the urban communities of the state, then 80 per cent of the rural school children and 40 per cent of the city school children have not been vaccinated against smallpox. The conditions in Geary county and Junction City are probably better than the average because of their close proximity to the military reservations, and the county having been in the extracantonment zone during the war and since that time the county has enjoyed the services of a full-time health organization.

It is easy to see that under the present conditions there is imminent danger from a widespread epidemic of smallpox. The mortality from this disease is also increasing.

EPIDEMIOLOGIST.

Your epidemiologist and chief of the department, Dr. T. D. Tuttle, having resigned at the end of the first six months of the period covered by this report, the division was left without a chief. At the time it was not considered advisable to permanently fill the position, consequently the present incumbent was assigned to this office until Doctor Tuttle's successor could be elected. In view of the uncertain tenure of office, no work of a radical nature or change has been undertaken by the division, the idea of the writer being to preserve the organization and to be able to turn over to the chief of the division, when he should qualify, a smooth-working organization that would be able to take care of the routine work on its own initiative, thereby leaving the new chief free to study his problems, and to institute such changes as the conditions seemed to warrant. This objective, I think, has been attained, and the clerical personnel of the division is active and efficient.

COUNTY HEALTH WORK.

However, an efficient force and an efficient chief of staff does not necessarily mean that the prime objective of the department the reduction of morbidity and mortality from the communicable diseases will be attained. This objective can be attained only after the following conditions have been complied with. The people must be educated, not only as to the wording and meaning of the law, but also to the necessity and advantage of a good and just quarantine regulation. They must be taught that the quarantine is not an absolute protection, but only a relative measure. They must be taught that epidemics can be prevented, but cannot be stopped once they have reached such proportions as to affect every section of a county. They must be taught that even though they have a perfect quarantine law and efficient health officials, neither can be a success without the individual coöperation of the citizens of the community.

It is manifestly impossible for the members of the executive staff of the State Board of Health to create and maintain a personal contact with the citizens in the counties and communities of the state. Not only this particular division, but any branch of the state department, cannot attain the maximum results and fulfill properly its obligation to the people of the great state of Kansas until it reaches out to the people. There must be liaison officers. The natural routes of expansion have been provided, but have not been developed through the county as a unit. Each county should be a miniature state health department, with a full-time health officer at the head of the department, working in harmony and absolute concord with the central department or the State Board of Health. The county should provide the local public-health machinery, while the state should subsidize and coördinate the work of the different counties in such a manner as to insure the maximum efficiency on the part of the county machinery.

In accordance with the above ideas the present incumbent, in conjunction with your secretary, has been conducting a campaign to secure six demonstration counties in which to perfect such a program. The program must be limited to six counties because of the lack of more funds. These six, however, located in the different sections of the state, will serve as the nucleus from which development can take place. The idea of the demonstration being not only to demonstrate to the people of the particular county the advantages and benefits to be derived from public-health protection, but as a demonstration to the adjacent counties and as a stimulus to the surrounding counties to follow the wise leadership of the demonstration counties.

Respectfully submitted,
A. J. Warren, M.D., *Chief.*

Annual Report of Division of Communicable Diseases and Sanitation, 1922.

Concurrent with July 1, 1921, a coöperative budget in which the Kansas State Board of Health and the International Health Board participated became effective. The object of the coöperative budget was to finance a combined division of communicable diseases and sanitation and county health work.

PERSONNEL.

The budget partially provided for a personnel of four persons—a state director, who was to act as chief of the division; an epidemiologist; one full-time clerk, to do the clerical work in connection with the tabulation and recording of the reports of cases of illness and the distribution of biological products; and one stenographer.

Activities were begun July 1, with a personnel of three, namely, a state director, a clerk, and a stenographer, the duties of the epidemiologist being assumed by the state director until a satisfactory epidemiologist could be employed. During the first three months, with the exception of the state director, there was a complete turnover of the office force. The clerk resigned to go to her parents in another state, and the stenographer resigned to enter college.

The personnel of the division was not completed until the 10th of October, when Dr. F. G. Pedley, the present epidemiologist, joined the staff.

ACTIVITIES.

The activities of the division can be covered under the following general headings:

1. Securing reports of disease from physicians and making statistical tables of the same.
2. Control of communicable diseases and epidemics.
3. Distribution of biological products.
4. The promotion of county health work on a full-time basis.

The regulations of the State Board of Health require the reporting of diseases under five groups or classifications. Group one covers the infectious, contagious and communicable diseases; group two includes only the venereal diseases; group three includes toxæmias produced by the action of certain transmissible bacteria upon food products—"food poisoning"; group four includes cancer and pellagra; group five covers the industrial diseases, such as natural-gas poisoning and twelve others. The most important groups are one and two, with the exception of cancer; those diseases included in groups three, four and five are not of very great consequence to the state.

Group one includes diseases listed under thirty-seven general headings, and it is the most important group and the one that requires the major portion of the time of the division.

The state is divided into 105 counties and 12 cities of the first class. The state regulations require each county and each first-class city to have a health officer, whose duty it is to see that the physicians in his territory are supplied with franked cards for the reporting of disease. He also receives reports from practicing physicians, makes record of the same, and then transmits the original report card to this department, where a permanent record is made. The attending physician is required to placard the premises and institute quarantine, but the responsibility for the release from quarantine is placed upon the health officer.

During the budgetary period for one year the division has distributed approximately 40,000 report cards in small packages of 50 to 100 per package. A total of 36,757 reports have been returned and tabulated. These reports are tabulated weekly, monthly and annually. A weekly and monthly report is transmitted to the Surgeon General of the United States Public Health Service. A monthly tabulation is also made for publication in the monthly *Bulletin* of the State Board of Health and an annual tabulation for publication in the biennial report to the State Board. The prime object of the tabulation, however, is not for publication, but for information as the basis for intelligent, combative measures.

CONTROL OF COMMUNICABLE DISEASES AND EPIDEMICS.

The solution of any public-health problem is made more difficult and is prolonged in proportion to the number of individuals it involves and the greatness of the area over which the individuals are distributed, and its successful and complete solution is then possible only when the funds and personnel are adequate to meet the demands of the problem.

The control of the communicable diseases in Kansas is a problem that has to do with 1,777,088 individuals, who are irregularly distributed over an area of 81,774 square miles. The complexity of the problem is also magnified by the fact that the division, instead of having the responsibility of quarantine and its enforcement placed upon 117 well-chosen individuals in the capacity of health officers or quarantine officers, has to deal with approximately 2,600 physicians, who are their own quarantine officers. The division can only act in an advisory capacity, and often the advice given is not productive of action in accordance therewith. The main objective of the division in the control of communicable diseases at the present time and under the existing circumstances should be a program of extensive education, not of the physicians, but of the 1,777,088 individuals who compose the population of the state.

The distribution of biological products of proven value in the prevention of disease is of great importance in the control of certain maladies, such as smallpox, typhoid fever and diphtheria, but the wholesale use of these products depends upon the demand created as the result of wholesome education. This is a field that the department cannot develop until more funds are available. The greatest demand at the present time is for diphtheria antitoxin, which is distributed free only upon certification of the attending physician that the recipient is unable to pay for the same. During the past year there were supplied upon such certification more than seventeen million units of antitoxin.

As the result of an arrangement with the house of E. R. Squibb & Sons, the various biological products are available in every county in the state at greatly reduced prices to the public.

COUNTY HEALTH WORK.

The major problem that confronts most state boards of health is the proper education of the people relative to disease prevention and health conservation; and this information must be disseminated in such a manner as to cause the individual to apply the principles of hygiene and sanitation and receive benefits therefrom. The problem is to a very great extent a personal and individual one. It is not practical for a state department to create and maintain individual, personal contact with one and three-quarters million people through a highly centralized organization at the state capital. Such an organization would be in direct contrast with our time-honored policy of local self-government. This fact is recognized in the other branches of our civil government, and as adjuncts to the state executive departments, which cannot be in direct contact with the people, we have the county government, which is in direct and constant touch with the citizenship of the state. The logical way for the State Board of Health to expand is not to create new districts or subdivisions, but to recognize those that are already in existence and to use them to further their own end. The responsibility for such expansion should not and cannot be successfully borne by the state department alone. The people should share the responsibility through their county officials. The county should provide the necessary public-health machinery, and the state should subsidize and coördinate the work of the different counties in such a manner as to increase the county initiative and to insure the maximum efficiency on behalf of the county organization.

The state director, in conjunction with the secretary of the Board, accordingly outlined a plan of county health work as follows:

PLAN OF COÖPERATIVE COUNTY HEALTH WORK FOR COUNTY.

The Kansas State Board of Health is willing to enter into a coöperative program with any county for the purpose of establishing a county health department to demonstrate to the people of the county the advantage of and the necessity of such an organization for the protection of the public health.

The following units of work shall constitute the foundation upon which all the activities of the department shall be based:

1. Unit of quarantine and epidemiology.
2. Unit of public-health education.
3. Unit of sanitation.
4. Tuberculosis unit.
5. Infant hygiene unit.

6. Unit of physical inspection of school children.
7. Dispensary unit.

I. Unit of Quarantine and Epidemiology. The work of this unit shall be conducted in accordance with the laws of the state and the rules and regulations of the State Board of Health, which laws and regulations are to be regarded as the minimum requirements. The health officer shall conduct such other epidemiological work as his time will permit, that may be of value in protecting the public health.

II. Unit of Public-health Education. The object of this unit is to properly inform the people of the county upon matters relating to the public health.

In the conducting of this unit free use should be made of the county press for the publication of suitable articles. Personal and circular letters and personal visits and conferences, together with the distribution of pamphlets, folders, bulletins and posters, should be freely indulged in. Exhibits at county and community fairs will be helpful.

The most effective means of educating the people is by the use of lectures illustrated with lantern slides. These lectures should be carefully prepared and should be given by the health officer at every school district in the county.

The accomplishments of the department at the end of any given period will be commensurate with the amount and effectiveness of the educational propaganda the department has or has not conducted. It is important, therefore, that this unit of work be vigorously pursued at all times.

III. Unit of Sanitation. Sanitation means the establishment of conditions favorable to health. This unit of work here, however, is more specific and means the following:

1. A survey of every home in the county, to determine the following:
    (*a*) Presence of latrine.
    (*b*) Type of latrine.
    (*c*) Location of latrine and relation to water supply.
    (*d*) Type of water supply.
    (*e*) Drainage.
    (*f*) General sanitary conditions.
    (*g*) House screened.
    (*h*) Construction of house.
    (*i*) Number of rooms.
    (*j*) Number of occupants.
2. A definite attempt to have remedied any conditions found that are potential dangers to the health of the individuals occupying the premises.
3. The inspection of all public places to see that latrines and water supplies are in such conditions as not to be a source of danger to those who frequent the place, or to those in the adjacent community.
4. The inspection of all dairies in the county to see that the milk is produced under sanitary conditions and comes from a herd free from tuberculosis.
5. The prompt attention to all complaints relative to insanitary conditions.
6. The abatement of sanitary nuisances.

In teaching sanitation we are simply teaching cleanliness, and it is well to keep in mind that there are two kinds of cleanliness—physical or æsthetic, and biological cleanliness. The difference between the two may be illustrated by a comparison between the dangers from accumulated refuse on the school grounds and the use of a common drinking cup at the school. If we remove the accumulated rubbish, what have we accomplished towards the prevention of disease? Again, a tetanus spore on the shining blade of the surgeon's knife makes that instrument filthy, whereas many such spores upon the breast of a chicken may be harmless when ingested.

IV. TUBERCULOSIS UNIT. In the conducting of this unit the following outline should be followed:

1. Make a record showing the names and addresses of all deaths from tuberculosis having occurred in the county during the two previous years. Keep it up to date.
2. Make a record of all cases of tuberculosis having been reported in the county during the two previous years, and keep it up to date.
3. Make an effort to improve the reporting of cases of tuberculosis in the county. Try to get a report of all suspected cases.
4. Make and keep up to date a tack map illustrating the above three items.
5. Visit all homes represented by 1 and 2.
6. Arrange for and conduct in convenient locations in the different sections of the county clinics for the diagnosis of incipient tuberculosis.
7. See that all cases are supplied with sputum cups and paper napkins. These may be had free from the State Board of Health.

V. INFANT HYGIENE UNIT. In the conducting of this unit the following outline should be followed:

1. Make a record of all births having occurred in the county during the two previous years.
2. Make a record of all premature and stillbirths having occurred in the county during the two previous years.
3. Make a record of all breast-fed children.
4. Make a record of all bottle-fed children.
5. Make a record of all children in the county under two years of age suffering from digestive disturbances or diarrheal diseases.
6. Make a record of all midwives who practice in the county.
7. Make a tack map illustrating items 1 to 6, inclusive.
8. Visit all homes represented by 2, 4, and 5.
9. If the midwives cannot be eliminated from the practice of midwifery, then instruct them in the rudiments of asepsis and obstetrics.
10. Have all local registrars report weekly all births having occurred in their districts.
11. Request the physicians and midwives to report their prenatal cases as soon as they come under their observation.
12. Visit all homes represented by items 10 and 11.
13. Conduct in convenient locations in the county baby clinics for the weighing and measuring of the babies of the community and for physical examinations to detect correctable defects. These clinics should also be prenatal clinics where expectant mothers may come for examination and advice.

VI. PHYSICAL INSPECTION OF SCHOOLS AND SCHOOL CHILDREN.

1. A physical record should be made out for each pupil upon his entrance

to school. This should follow him throughout his school life and contain his complete physical history.

2. Systematic physical examination should be given to all school children, inviting neighborhood physicians to assist.

3. Parents or guardians should be confidentially notified of physical condition, with suggestion that the child be sent to the family physician or dentist.

4. Intensive and individual follow-up work should be done to insure the correction of as many defects as possible, the object of the unit not being the examination but the correction of the defects.

5. An effort should be made to establish clinics at some suitable place for the correction of defects in indigent cases.

6. The health department should keep constant supervision over the schools for the detection and prevention of spread of communicable diseases. A safe water supply, individual drinking cups and towels, improved privies of an approved type, proper ventilation, lighting and heating should be insisted upon.

VII. DISPENSARY UNIT. The health officer shall conduct in every section of the county dispensaries for the free administration of typhoid and smallpox vaccines.

Before a dispensary is held it shall be thoroughly advertised both as to time, date and place at least one week in advance.

The state agrees to furnish free smallpox and typhoid vaccine.

METHOD OF PROCEDURE. In the execution of the above outline units of work, it is believed that the best results will be obtained by pursuing a modified, intensive method.

Of the seven units of work, all except two, six and seven relate to public-health hazards that are constantly present, and will require attention at all times. Still it is possible and desirable to intensify the work of each unit in rotation, and at the same time not neglect the other units. For instance, with the beginning of spring devote particular time and efforts to the unit of infant hygiene; endeavor to arouse greater interest of the mothers and others in the children. Put on a special publicity campaign and concentrate the efforts of the department on this particular unit at this particular time, and at the same time carry on in a less intensive manner the other units of work. In the fall intensify the tuberculosis unit and conduct in a less intensive way the other units, and so on through the entire program.

To insure the maximum results each unit of work should be carefully considered and planned before it is undertaken. If possible, a definite order of procedure should be established so that the work of the different units will merge one into the other and the work of the different units will not overlap or be duplicated.

RECORDS AND REPORTS. The health officer shall keep accurate and neat records of all the activities of his department.

He shall make weekly, monthly and annual reports to the county commissioners. The monthly and annual reports shall include also a financial report. These reports shall cover in detail all the activities of the department.

PERSONNEL. The health officer may be employed by either the county or the State Board of Health, but his appointment must be confirmed by both before he can assume charge of the department.

The other members of the staff shall be employed by the health officer, and he shall be held responsible for their performance, in a satisfactory manner, of all duties that may be assigned to them.

The State Board of Health will supervise and direct the department to insure the maximum results for the money spent by the contracting agencies.

FINANCIAL PROCEDURE. The funds appropriated by the county shall remain in the county and be disbursed through the regular channels. The funds appropriated by the state shall remain in the state treasury and be disbursed in accordance with the laws and customs regulating the same. The funds appropriated by the allied agent or agents coöperating with the State Board of Health shall be deposited on the first day of each month with the county treasurer, in sufficient amount to cover the percentage of expenditures of said agent or agents for the month previous.

Before any of the funds of the state or allied agent or agents can be disbursed, duplicate receipted vouchers covering all the expenditures of the county health department for the previous month shall be deposited with the secretary of the State Board of Health.

The funds appropriated for the department can be spent only for the items for which they are specified in the budget herewith attached.

OFFICE. The county shall furnish suitable office room and office equipment for the health officer and his assistants. The office room shall be in the county courthouse.

BUDGET FOR A COOPERATIVE HEALTH DEPARTMENT.

1. Salary, health officer	$3,000.00
2. Travel, expense, health officer	720.00
3. Salary, nurse	1,800.00
4. Travel, expense, nurse	600.00
5. Salary, clerk	900.00
6. Contingent fund	480.00
	$7,500.00

SOURCE OF FUNDS.

County	$5,000.00
State Board of Health	2,500.00
	$7,500.00

As the result of the coöperative budget shared by the State Board of Health and the International Health Board, the state on July 1 had funds available to extend financial aid to the extent of $2,500 to six counties who would appropriate a sum of $5,000 and employ a personnel as outlined in the above plan of work.

During the year four counties have availed themselves of the opportunity offered, namely: Geary on July 1, Ford on August 1, Ellis on October 1, 1921; and Ottawa on April 1, 1922. A total of twenty-four counties have been visited and an effort made to interest the citizens in a coöperative plan of work, with positive results in only four.

There are four principal reasons why an appropriation of $5,000 is difficult to secure from a board of county commissioners. First, taxation; second, the absence of a very pressing and acute health hazard or appeal; third, the newness of the idea; fourth, the part-time health officer system.

Taxation is a word often used and little understood. It has been a live word since the Boston Tea Party, and a boon to the professional agitator. In spite of its longevity, however, it has periods of unusual activity and at times it is difficult to determine whether the underlying cause is really a renewed vigor or senile dementia. At the present time one of the spells is on. Most of the protest is coming from the rural districts. Prices of farm lands, wheat, corn, hogs and cattle have gone down. At the same time the cost of government at the statehouse, at the courthouse and in the city hall is more than ever before. The county officials, being in direct contact with people, have to bear the brunt of the abuse heaped upon the government by thoughtless voters. County commissioners are sore and grouchy and are exerting every effort to curtail county expenses. It is not a difficult problem to convince a commissioner that public-health protection is a good thing and a reasonable investment, but he will not spend a dollar for it until his voters are also convinced and demand of him the necessary appropriations. This they often will not do, though admitting the apparent wisdom of so doing, because of the newspaper propaganda regarding the high cost of, and the waste of, and the inefficiency of government. The situation is acute and it is hoped that the crisis has been passed. In 1916 the state raised by direct taxation $35,000,000; in 1921 $75,000,000.

Comparatively speaking, Kansas is a new state and sparsely populated. Many of the original settlers are still active in the life of the state. Originally they were of necessity robust and vigorous and led lives of plain, simple habits. To their progeny of the second generation has been transmitted the same characteristics, but probably to a lesser degree. The death rate is comparatively low. Hookworm disease cannot be propagated on account of the absence of those meterological or climatic conditions that are necessary for the life of the larvæ. Typhoid fever is influenced by the same conditions, but to a greater degree by the extensiveness of water and sewage systems in practically all of the urban areas. The death rate from tuberculosis and the infant mortality rate is low in comparison to other states. It is true that none of the death rates are as low as they should be and could be but the absence of a very definite and imperative appeal or demand is conducive to contentment on the part of people with the existing arrangements.

In the majority of instances, when the proposition of full-time county health work is presented the idea is so new and so foreign to their present viewpoint as to be incomprehensible to the vast majority of citizens. Time will be required for consummation, and when the light dawns, action will probably follow, provided the condition of "Old Man Taxation" has improved in the meantime.

Many of the part-time health officers receive compensation at the rate of $100 per month, and where a town or city contributes to the salary it may range as high as $175 per month. The vast majority are greatly overpaid. The part-time official is appointed by a vote of the county commissioners. His salary is also fixed by the same board, and it is usually comparable to his political influence. The State Board of Health has no authority whatever in the situation. The majority of the part-time men would not accept the position on the full-time basis at a salary of $3,000 per annum. In many instances they are also unwilling to release their hold upon the part-time salary, and accordingly cast their influence against the efforts of those interested in a full-time county health department. The part-time men are appointed for a period of one year, from January 1 to December 31.

METHOD OF APPROACH. There is only one effective way to approach a board of county commissioners, and that is through the people whom they represent. In every community there exists one or more civic organizations that can be interested in the promotion of the department, and the success or failure often depends upon the strength of the organization behind the movement. Once sentiment is aroused it is better to push the matter to a definite conclusion, for if there occurs a release of sentiment the second arousal is more difficult, not so acute, and an adverse conclusion is favored.

STATISTICAL REPORT.

BIOLOGICALS AND PROPHYLACTIC SUPPLIES DISTRIBUTED.

July 1, 1921, July 1, 1922.

Diphtheria antitoxin	17,248,000 units.
Diphtheria toxin-antitoxin	2,434 c. c. (or ampules).
Diphtheria Schick test	59 (10-test packages).
Pasteur antirabic, first seven days' treatment	6
Pertussis vaccine	1 (20 c. c.).
Smallpox vaccine	32 (5 tube).
Smallpox vaccine	151 (10 tube).
Tetanus vaccine	2 (10,000 units).
Typhoid vaccine	304 (20 c. c.).
Typhoid vaccine	5 (3 ampules).
Tuberculosis prophylactic supplies sent	541 packages.

STATISTICAL REPORT OF THREE COUNTIES FOR A TOTAL OF TWENTY MONTHS.

EDUCATIONAL:	
Public meetings	103
Attendance	4,214
Letters sent	716
News articles (original)	79
News articles (press)	301
Office conference, hours	411
Pieces of literature	4,046
SOIL POLLUTION:	
Sanitary privies, rural	5
Sanitary privies, towns	3
Specimens, stools examined	31
Water supplies improved	9
SCHOOLS:	
Schools visited	320
Children examined	3,515
Children treated	506
Sanitary privies installed	4
Physical exam. teachers	5
DISPENSARIES:	
Vaccinations, typhoid	572
Vaccinations, smallpox	2,291
CITY (SPECIAL):	
Inspections, hotels, etc	173
Dairy inspections	87
Milk examinations	106
Sewer connections	22
Special investigations	107
Nuisances abated	49
Dairy cows tuberculin tested	881
Milk dealers fined for violation of ordinance	2
Water examinations	121
QUARANTINE:	
Cases quarantined	832
Whooping cough	185
Measles	70
Diphtheria	152
Septic sore throat	3
Smallpox	18
Chickenpox	244
Typhoid	19
Cerebrospinal meningitis	1
Infantile paralysis	3
QUARANTINE—*Continued*:	
Trachoma	6
Ophthalmia neonatorum	2
Venereal disease	54
Scarlet fever	146
Diphtheria cultures	1,944
Premises disinfected	139
Convictions for violations of quarantine law	2
COUNTY DEPENDENTS:	
Visits to county home	35
Visits to county jail	34
Patients treated	121
Physical examination of prisoners	4
NURSES' REPORT (GENERAL):	
Number on duty	3
Lectures	110
Attendance	2,799
Office visits	306
Assistance to health officer, hours	839
News articles	8
Letters sent	114
INFANT HYGIENE:	
Clubs organized	5
Clubs visited	27
Demonstrations	41
Conferences, personal	679
Cases visited (mother)	366
Cases visited (child)	394
Midwives instructed	2
Furnished silver nitrate	1
Schools visited	254
Children examined	4,882
Prenatal letters provided	1
Diet cards provided	5
Baby clinics	11
Babies examined	109
TUBERCULOSIS:	
New cases	37
Visits made, instructive	128
Visits made, nursing	12
Demonstrations	0
Conferences, personal	9

RESULTS OF THE PHYSICAL INSPECTION OF SCHOOL CHILDREN IN GEARY COUNTY, 1921-'22.

	Number.	*Per cent.*
School children in county	2,232	100.0
School children examined	2,156	96.5
School children successfully vaccinated against smallpox	1,680	77.0
More than 10 per cent underweight	447	20.7
Defective hearing	28	1.2
Diseased tonsils	586	27.1
Defective vision	313	14.5
Children in need of dental attention	1,250	57.9
Children who have had dental attention	596	47.6
Children who have had tonsils and adenoids removed	258	44.0
Children who have had vision corrected	64	20.4

Report of Epidemiologist.

By Frank G. Pedley, Epidemiologist.

Dear Doctor Crumbine—I have the honor to submit herewith the report of the epidemiologist for the year ending June 30, 1922.

Submitted with this report are also the morbidity statistics of the year ending December 31, 1920, and December 31, 1921.

GENERAL STATEMENT.

Your epidemiologist assumed office in October, at which time diphtheria had become epidemic throughout the eastern and central parts of the state. Diphtheria slackened in November, but with its subsidence appeared scarlet fever in epidemic proportions and the disastrous outbreak of malignant smallpox in Kansas City. The incidence of disease decreased markedly in January and has remained fairly low ever since.

In addition to investigation from time to time of local outbreaks of disease, which is the first function of my office, other activities have been carried on.

Considerable correspondence is dealt with each day. From time to time there have been calls from medical societies and other organizations for addresses on various subjects, and so forth.

By means of two circular letters sent out in September the medical profession was warned of the diphtheria epidemic and urged to make full use of antitoxin and of toxin-antitoxin and the Schick test. A supply of toxin-antitoxin and Schick-test material was offered free to physicians. Response to these circular letters was gratifying—in fact, overwhelming—but with the distribution of 2,434 doses of toxin-antitoxin and 59 ten-test Schick outfits, our finances failed and we were compelled to refuse a large number of applications.

Local physicians gave considerable publicity, however, to this relatively new prophylactic and there is no doubt that a very great number of children were immunized in this way against diphtheria. In fact in one county (Wabaunsee) a systematic attempt was made, with the coöperation of the county commissioners, to immunize the whole school population. This publicity caused numerous requests to be received at this office for further details, and several addresses were delivered at different county medical societies on the subject.

During the present year I have devoted considerable time to education by means of moving pictures. With the aid of our portable moving-picture machine I have been able to visit a number of high schools and to give short health shows to the students. This spring I have emphasized particularly smallpox and diphtheria, partly because these diseases were threatening and partly because we were able to secure some good films on those subjects. It is planned, however, in the future, as different films become available, to take up other topics. With the closing of schools there has been a decrease in the demand for these pictures. I have, therefore, been able to devote my spare time to visiting various county health officers. It is hoped that every county health officer can be visited at least once a year; for although this is a task of considerable magnitude, it is of far greater value than correspondence in keeping in touch with the greatest of all health forces—the county health officer.

COMMUNICABLE DISEASES.

DIPHTHERIA.

In the last annual report a rather marked increase in the reported cases of diphtheria was noted. The records of the previous years show that this increase has been gradually progressive since the year 1918.

It is stated by some that diphtheria occurs in an epidemic way at fairly regular intervals. The statistics of Kansas do not affirm or deny this, since they do not reach far enough back. In table No. 1 the number of cases of diphtheria and deaths reported in Kansas during the past nine years is given. Table No. 1 also illustrates the characteristic seasonal distribution of diphtheria in Kansas. It will be noted that in every instance at least 50 per cent of the cases occurred during the five months from September to February, inclusive. In 1921 85 per cent of the cases were reported during this period.

TABLE No. 1.—Diphtheria cases and deaths in Kansas, 1913-1921.

YEAR.	Estimated population.	Whole year.			Sept., Oct., Nov., Dec., Jan.	
		Cases.	Deaths.	Fatality.	Cases.	Deaths.
				Per cent.		
1913	1,714,442	725	47	6.5	382	37
1914	1,722,273	1,528	167	10.9	1,431	137
1915	1,730,104	2,564	238	9.3	1,961	160
1916	1,737,935	1,637	195	11.9	1,027	108
1917	1,745,766	1,331	155	11.6	863	90
1918	1,753,597	1,274	130	10.2	572	68
1919	1,761,428	2,059	191	9.3	1,616	130
1920	1,769,257	4,223	264	6.2	3,892	212
1921	1,777,088	7,882	384	4.9	6,693	291

From September 1, 1921, to January 31, 1922, 6,693 cases of diphtheria were reported to this department. During the same time 291 deaths were reported to the Division of Vital Statistics. The low fatality rate of 4.35 per cent indicates that antitoxin is being generally and freely used and that the reporting of the disease must be fairly good throughout the state. Frank clinical cases of diphtheria undoubtedly are well reported, but cases of diphtheritic sore throat frequently go unrecognized. These cases, together with the healthy carriers, are probably the factors principally concerned in the propagation of the disease.

Reference again to table No. 1 shows considerable fluctuation in the fatality rates from year to year. This variation is probably more apparent than real, but there can be little doubt that the virulence of the diphtheria bacillus varies from time to time and is probably quite independent of its power of infecting.

In table No. 2 is given the number of cases reported from week to week from September 1, 1921, to February 1, 1922.

TABLE No. 2.—The weekly incidence of diphtheria in Kansas, September 1921, to January, 1922.

Week ending.	Cases.	Week ending.	Cases.	Week ending.	Cases.	Week ending.	Cases.	Week ending.	Cases.
Sept. 3	78	Oct. 1	386	Nov. 5	430	Dec. 3	327	Jan. 7	191
Sept 10	119	Oct. 8	419	Nov. 12	430	Dec. 10	230	Jan. 14	190
Sept. 17	166	Oct. 15	555	Nov. 19	470	Dec. 17	287	Jan. 21	123
Sept. 24	253	Oct. 22	568	Nov. 26	342	Dec. 24	190	Jan. 28	146
		Oct. 29	647			Dec. 31	206		

The monthly distribution of the reported cases is graphically shown in chart No. 1. Reference to this will show that whereas the incidence of diphtheria is less now than it was at this time last year, nevertheless it has not reached a normal or median prevalence. For this reason another epidemic is to be feared next fall, but judging from the figures it is unlikely the disease will reach the same proportions as last fall.

Chart No. 2 illustrates the age and sex distribution of the cases. Attention is drawn to the fact that in practically all ages females were more affected than males, notwithstanding the fact that the male population in Kansas is greater than the female. It is comparatively easy to explain the greater incidence of the disease among the females in the older ages, since their occupation necessarily exposes them more than males, but why females below the age of fifteen should be more affected than males it is difficult to say.

A study of the geographical distribution of the disease shows it to have been widespread throughout the state. The western part of the state, however, suffered considerably less than the central part, and the central part less than the eastern. For the purpose of exact measurement three arbitrary lines were drawn north and south through the state. In this way three territories were created: the eastern bounded on the east by the state line, and on the west by a line drawn north and south at the western border of Osage county; the central bounded on the east by the western border of Osage county, and on the west by a line drawn at the western border of Reno county; the western territory comprises the remaining counties in the state, and is by far the largest territory of the three.

In the eastern territory the morbidity rate from September 1 to February 1 was 521 per 100,000; in the central, 333.6; in the eastern, 150.3.

The differences in the morbidity rates of the three territories may be accounted for partly by better reporting in the eastern part of the state, but the most probable reason is the fact that the population is denser and there are more cities in the eastern counties. In order to further illustrate the relation of density of population to incidence of disease, chart No. 3 has been constructed. In this chart the urban rates were obtained by adding together the morbidity reports of twelve cities. The rural rates are those of the remainder of the state.

METHODS OF CONTROL. As to the efficiency of the present methods used for the control of diphtheria there is considerable difference of opinion. The best

CHART NO. 1.

DIPHTHERIA BY MONTHS IN KANSAS

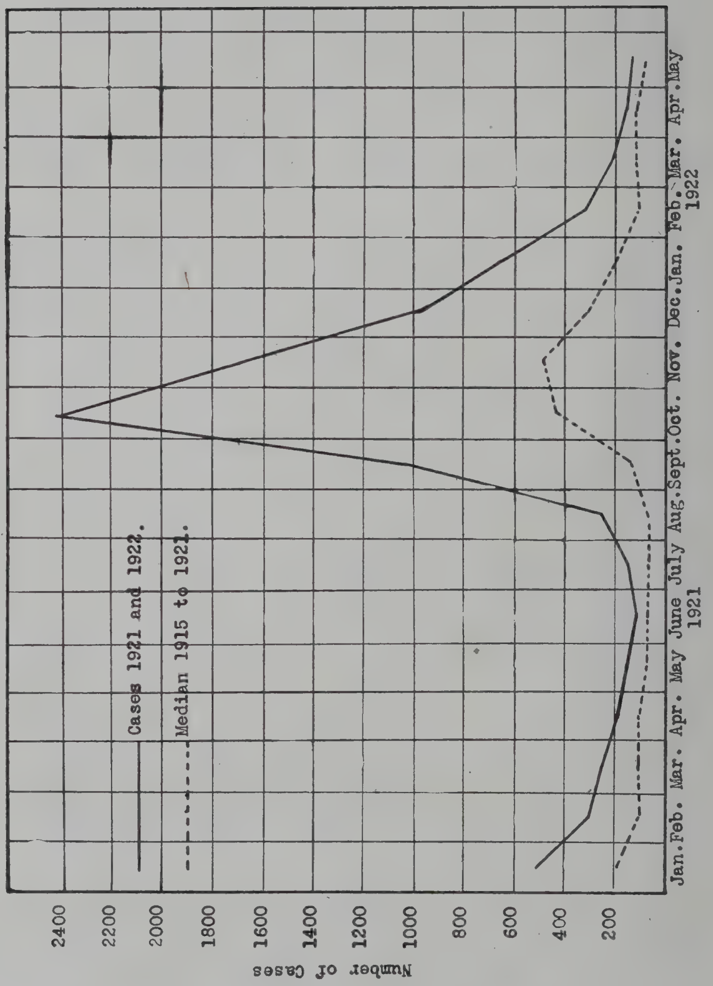
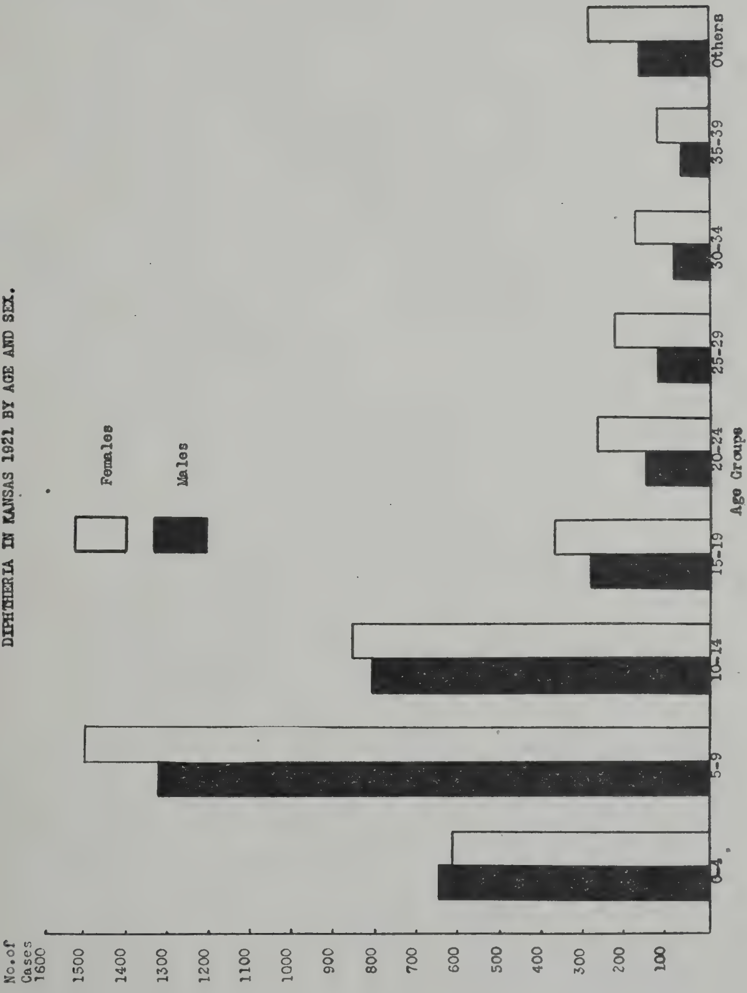


CHART NO. 11.

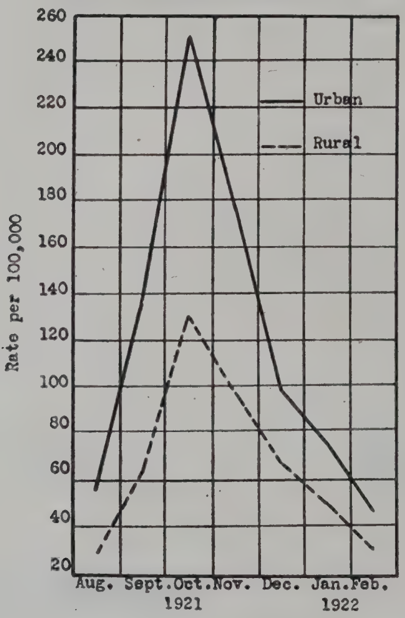
DIPHTHERIA IN KANSAS 1921 BY AGE AND SEX.



that can be said of quarantine, as it is at present administered, is that it diminishes the incidence of the disease. The worst that can be said is that it has no effect whatever on the course of the disease. If physicians would only appreciate the necessity of promptly reporting and quarantining the first case they see of any disease, much better results would be obtained from quarantine, but all too frequently physicians are careless about the first case and do not commence taking precautions until the disease has obtained a firm hold, and at this time quarantine is usually too late to be effective.

CHART NO.111.

Urban and Rural Diphtheria in Kansas



As to the quarantine and culture method of controlling a diphtheria epidemic, this is undoubtedly more effective, but here too it is essential that the efforts should be commenced early. The Topeka health department and the Wichita health department each made energetic efforts to control the epidemic by searching for and isolating healthy carriers. The course of the epidemic in these cities is compared with the course of the epidemic in the surrounding territories in table No. 3. In columns Nos. 5 and 10 of this table is estimated the number of cases which would have occurred in Topeka and in Wichita if the rate of reduction in the surrounding territory had obtained. These figures, though open to criticism, do suggest that a systematic search for carriers will lessen the incidence of the disease.

Of course, just as in smallpox, the rational method of control is by immunizing the susceptible population. Just as in smallpox, however, it is doubtful whether much can be done in this way without resorting to legal coercion. Wabaunsee county is to be congratulated on its stand, and it is to be hoped that the commissioners of other counties will follow its lead. To date this office has record of 3,147 complete immunizations with toxin-antitoxin. Undoubtedly, however, several thousand more persons have been immunized. Practically all of these 3,147 persons are children. Among them two cases of diphtheria have been reported.

TABLE No. 3.—A comparison of the course of the diphtheria epidemic in localities where a search for carriers was made and in localities where no such search was made.

MONTH.	Eastern division.		Topeka.		Cases in Topeka if state rate of reduction had occured.
	Cases.	Percentage reduction.	Cases.	Percentage reduction.	
	1	2	3	4	5
October......	1,364	100	290	100	290
November....	787	57.7	178	61.4	167
December....	527	38.6	85	29.3	112
January......	250	18.3	42	14.5	53
			595		622

MONTH.	Central division.		Wichita.		Cases in Wichita if state rate of reduction had occurred.
	Cases.	Percentage reduction.	Cases.	Percentage reduction.	
	6	7	8	9	10
October......	545	100	216	100	216
November....	499	91.5	93	43.1	198
December....	441	80.9	64	29.6	175
January......	233	42.7	34	15.7	92
			407		681

The Schick test has not proved very popular in the state, nor does it seem to be very well suited to rural conditions. While comparatively simple in execution, it requires a considerable amount of experience in its interpretation, and this experience is somewhat difficult for physicians in rural communities to obtain. For this reason, and also for the reason that the small ten-test outfits supplied commercially do not seem to be very reliable, the state has not urged very strongly the use of the Schick test; instead it is recommended to regard every young child as susceptible to diphtheria and to immunize him with toxin-antitoxin.

SCARLET FEVER.

While many cases of the disease were reported to the department, mortality was low. The mildness of the disease may have been an important factor in its unusual prevalence, since many cases undoubtedly occurred and were not recognized, and even in those cases seen by physicians a regrettable laxity in enforcing the quarantine regulations frequently occurred. Although the law is quite explicit on the point, many physicians do not appreciate the fact that five weeks is the minimum quarantine for scarlet fever, and not three weeks. For this reason all county and city health officers were communicated with by circular letter and many were personally interviewed.

INFLUENZA.

This disease attained epidemic proportions in the month of February, but seems to have reverted to its former mild form. There is little cause to anticipate a virulent epidemic like that of 1918 or 1920 for some years to come.

SMALLPOX.

October and November witnessed the occurrence of probably the most malignant epidemic of smallpox experienced in this state in the last two decades. Partly by good luck and partly by good management, the disease was fairly well restricted to Kansas City. It spread, however, to one or two places in Kansas, notably Allen county; but it is remarkable, considering the number of unprotected people there are in Kansas, that the epidemic remained so sharply localized. The outbreak in Allen county has been reported elsewhere (monthly *Bulletin,* December, 1921). One of the benefits of the epidemic was that large numbers of people presented themselves for vaccination. Probably 150,000 to 200,000 people were vaccinated. There is good reason to believe that we have not seen the last malignant smallpox. For this reason special efforts have been made and will be made in the future to stimulate vaccination.

TYPHOID FEVER.

Reference to the statistical tables following this report shows that the number of cases of typhoid fever reported in 1921 was less than that reported in 1920. The number of deaths, however, was greater, so that the incidence of typhoid fever was probably not diminished to any great extent. Several epidemics of the disease occurred during the year, the most notable of which were the epidemics in Wichita and in Almena. Both of these epidemics were due to milk infection. Many of the physicians of Kansas seem to be under the impression that typhoid fever is essentially a water-borne disease. This is very unfortunate, since water probably plays a relatively minor role in the dissemination of typhoid fever in Kansas. Far more important in this regard are milk, flies, personal contact, etc.

MEASLES.

As was expected, measles was not a factor in morbidity of the past fiscal year.

TUBERCULOSIS.

During the year 1921 there were reported nearly 700 more cases of tuberculosis than were reported in 1920; this in spite of the fact that the tuberculosis death rate was lower in 1921 than in 1920. Evidently reporting of tuberculosis is improving, but there must still be thousands of cases of tuberculosis in Kansas not on our list. We are making every endeavor to stimulate reporting, particularly early reporting, but still the majority of cases are not reported to us until within a few months of death. Elsewhere in this report will be found a statement as to the number of prophylactic supplies sent out during the year. In addition to sending prophylactic supplies when requested, literature has been sent to each case of tuberculosis reported to us.

INFANTILE PARALYSIS.

There was rather a marked increase in the number of cases of poliomyelitis reported to this office during 1921—88 cases, as compared to 26 in 1920. The disease did not seem to reach epidemic proportions in any part of the state, but was more or less diffusely scattered. Chart No. 4 shows the localities in the state where it has been unusually prevalent during the past eight years. The epidemiology of poliomyelitis is so baffling that no prediction can be ventured for the coming year.

MUMPS.

Mumps became epidemic in Sumner, Barton and Finney counties during the past year. Table No. 4 shows the age and sex distribution of 599 cases of mumps collected from the records of 1921 and 1922.

TABLE No. 4.—599 cases of mumps by age and sex in Kansas, 1921-1922.

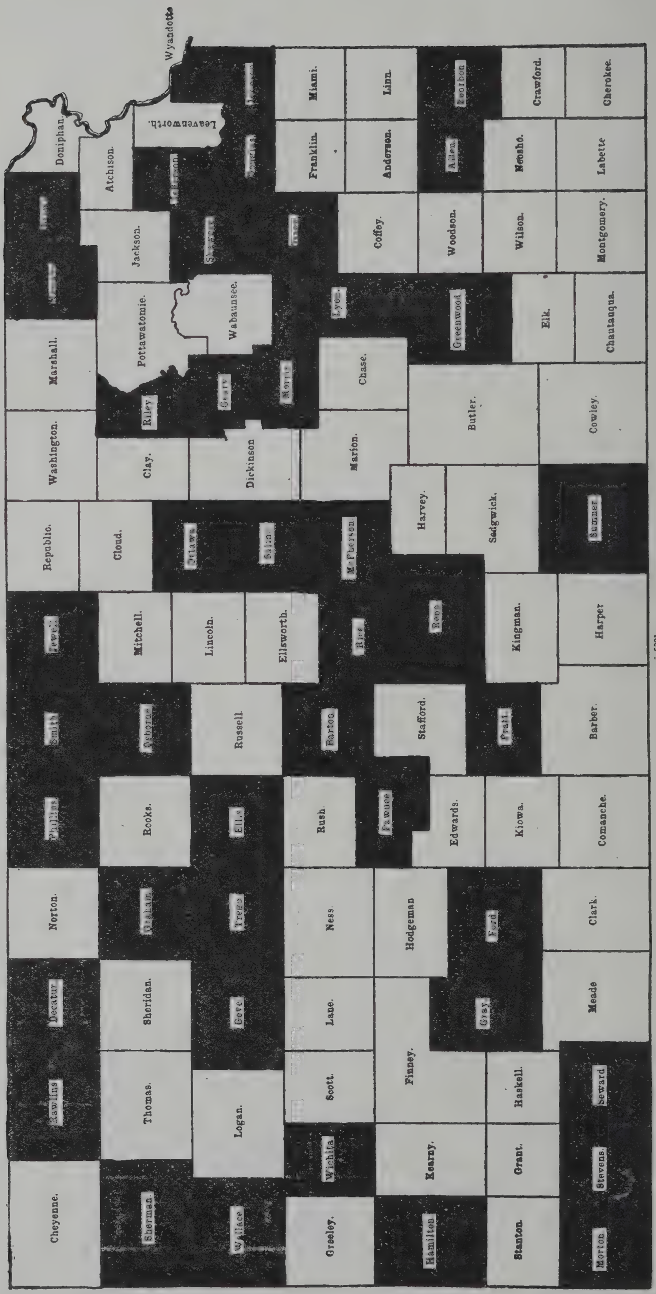
AGE GROUP.	Under 1.	1 to 4.	5 to 9.	10 to 14.	15 to 19.	20 to 24.	25 to 29.	30 to 34.	35 to 39.	40 to 44.	45 to 49.	59 and over.	Not stated.	Total.
Males.......	0	3	109	96	66	15	3	7	4	5	4	2	13	327
Females.....	0	12	81	80	51	3	7	8	7	1	3	4	15	272

OTHER COMMUNICABLE DISEASES.

The incidence of the other communicable diseases may be seen by consulting the statistical tables which follow this narrative report.

Chart No. 4.

POLIOMYELITIS IN KANSAS 1914-1921



Dark Areas Indicate Where Disease Has Been More Prevalent Than Normal

Statistical Tables.

UNIVERSITY [illegible]
DEC [illegible] 1922

DIPHTHERIA.

TABLE I.—Cases reported from counties and first-class cities during 1920, by months, with deaths and case fatalities.

COUNTIES AND CITIES.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Totals.	Deaths.	Case fatality.
Allen	1	0	0	0	1	1	2	1	64	49	45	17	181	10	5.5
Anderson	0	0	0	0	0	0	1	3	3	19	25	11	62	0	0.0
Atchison, except	0	0	0	0	1	1	0	0	0	3	11	1	17	0	0.0
Atchison city	1	0	0	0	0	0	0	0	0	7	10	19	37	1	2.7
Barber	8	0	0	0	0	0	0	0	1	0	0	0	9	1	11.1
Barton	0	0	2	0	0	1	0	0	2	2	18	9	34	2	5.9
Bourbon, except	0	0	0	1	0	0	2	9	0	8	8	2	30	3	10.0
Fort Scott	2	1	0	1	0	0	3	11	28	73	56	19	194	6	3.1
Brown	0	0	0	0	0	0	1	0	4	6	9	1	21	1	4.8
Butler	8	9	3	5	1	5	1	0	16	55	64	30	197	12	6.1
Chase	0	0	0	0	0	0	0	0	0	1	1	0	2	0	0.0
Chautauqua	3	2	0	0	2	0	0	1	11	48	26	24	117	6	5.1
Cherokee	9	3	2	1	0	0	2	3	9	47	21	8	105	12	11.4
Cheyenne	0	0	0	0	4	0	0	0	0	3	2	0	9	0	0.0
Clark	0	0	0	0	0	0	0	1	0	0	0	0	1	1	100.0
Clay	0	3	0	0	1	0	0	0	0	1	6	5	16	0	0.0
Cloud	2	1	0	0	0	1	1	0	1	2	2	0	10	2	20.0
Coffey	0	0	0	0	0	1	0	0	2	0	1	5	9	2	22.2
Comanche	1	3	0	0	0	0	0	0	0	0	0	0	4	1	25.0
Cowley	1	0	0	0	3	1	0	0	22	42	31	15	115	4	3.5
Crawford, except	4	2	4	0	0	1	1	0	16	73	50	22	173	12	6.9
Pittsburg	0	1	4	10	2	1	0	2	3	16	9	3	51	2	3.9
Decatur	3	0	0	0	0	0	0	0	0	0	0	1	4	0	0.0
Dickinson	2	2	3	1	1	0	0	2	2	5	6	4	28	2	7.1
Doniphan	10	2	0	0	1	1	5	1	0	4	1	3	28	1	3.6
Douglas	2	0	1	1	0	0	0	1	0	1	6	4	16	3	18.7
Edwards	0	0	0	1	0	0	0	1	0	0	0	1	3	1	33.3
Elk	0	0	0	0	0	0	0	0	2	3	7	4	16	0	0.0
Ellis	3	5	4	1	5	2	1	5	0	3	7	14	50	6	12.0
Ellsworth	2	2	0	1	0	0	1	0	0	2	2	9	19	0	0.0
Finney	0	0	0	0	0	0	0	0	0	7	5	2	14	0	0.0
Ford	3	4	1	1	0	2	0	1	1	11	4	2	30	4	13.3
Franklin	1	0	0	0	1	1	0	0	0	1	1	1	6	1	16.7
Geary	8	4	2	0	1	1	0	0	1	7	12	2	38	4	10.5
Gove	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0
Graham	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Grant	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Gray	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Greeley	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Greenwood	0	0	0	0	2	0	0	0	1	2	9	6	20	0	0.0
Hamilton	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0.0

Harper	0	2	1	0	0	0	1	0	7	1	9	3	24	3	12.5
Harvey	1	1	5	0	0	0	0	3	1	20	8	10	49	3	6.1
Haskell	0	0	0	0	0	0	1	0	0	0	0	0	1	1	100.0
Hodgeman	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0.0
Jackson	2	0	4	0	0	0	1	0	2	2	0	0	11	1	9.1
Jefferson	0	0	0	6	0	0	0	2	0	2	4	0	14	1	7.1
Jewell	0	0	0	0	1	0	0	0	0	1	1	0	3	1	33.3
Johnson	0	1	0	0	2	0	0	0	0	0	4	0	7	0	0.0
Kearny	0	0	0	0	0	0	0	0	0	0	3	0	3	0	0.0
Kingman	7	0	2	1	2	0	0	2	1	0	0	3	18	1	5.5
Kiowa	1	0	0	0	0	0	0	0	0	0	1	3	5	0	0.0
Labette, except	1	1	0	1	0	0	2	6	7	61	26	5	110	4	3.6
Parsons	1	3	7	1	6	0	2	2	8	26	29	10	95	2	2.1
Lane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Leavenworth, except	1	1	4	0	1	1	0	0	1	3	7	1	20	1	5.0
Leavenworth city	0	5	2	1	0	0	1	2	0	2	18	16	47	2	4.3
Lincoln	0	0	0	0	0	0	0	0	0	1	1	0	2	0	0.0
Linn	5	6	0	0	1	1	3	0	0	8	1	7	32	3	9.4
Logan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Lyon	4	1	1	1	0	0	1	3	12	8	4	8	43	0	0.0
Marion	6	1	13	0	0	2	1	1	0	12	9	7	52	5	9.6
Marshall	2	0	2	0	0	1	0	0	1	0	0	1	7	1	14.3
McPherson	1	0	0	0	0	0	1	0	2	4	4	7	19	2	10.5
Meade	3	0	1	0	0	0	0	0	0	0	11	0	15	0	0.0
Miami	0	0	0	6	3	0	0	0	0	11	14	22	56	3	5.4
Mitchell	0	0	2	0	0	0	0	1	0	0	0	0	3	0	0.0
Montgomery, except	14	0	6	3	1	1	5	13	54	100	81	26	304	12	4.0
Coffeyville	5	1	0	0	3	2	0	0	3	12	14	12	52	3	5.8
Morris	1	0	0	3	0	0	0	0	0	1	4	1	10	0	0.0
Morton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Nemaha	1	0	0	1	1	0	2	2	5	14	2	15	43	4	9.3
Neosho	0	1	4	1	0	0	1	1	6	19	18	16	67	4	6.0
Ness	2	0	0	0	0	0	0	0	0	1	0	0	3	2	66.6
Norton	1	0	0	0	1	0	0	0	0	0	0	0	2	1	50.0
Osage	3	0	1	2	0	0	0	0	0	0	2	0	8	0	0.0
Osborne	0	0	0	0	1	0	0	0	0	0	1	0	2	0	0.0
Ottawa	0	0	1	0	0	0	0	0	0	0	2	2	5	1	20.0
Pawnee	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0.0
Phillips	0	0	0	2	0	0	0	1	0	0	0	1	4	0	0.0
Pottawatomie	0	1	0	0	0	0	2	0	4	4	5	1	17	4	23.5
Pratt	0	0	1	0	0	0	0	0	0	2	2	1	6	1	16.7
Rawlins	0	0	12	7	3	2	0	0	1	0	0	2	27	5	18.5
Reno, except	1	0	0	1	3	0	0	0	0	9	14	1	29	3	10.3
Hutchinson	1	2	1	1	0	1	0	1	3	25	19	19	73	2	2.7
Republic	0	0	1	0	0	0	0	0	0	0	13	0	14	2	14.3
Rice	0	0	1	0	0	0	0	0	0	8	8	3	20	1	5.0
Riley	0	0	0	0	0	0	0	0	0	5	3	25	33	0	0.0
Rooks	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0.0
Rush	0	0	0	0	1	0	0	1	0	0	0	0	2	0	0.0

TABLE II.—DIPHTHERIA, 1920—CONCLUDED.

COUNTIES AND CITIES.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Totals.	Deaths.	Case fatality.
Russell	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Saline	15	4	6	2	1	0	2	3	3	7	23	19	85	7	8.2
Scott	0	0	0	0	2	0	0	0	0	0	0	0	2	0	0.0
Sedgwick, except	1	0	0	0	0	0	0	0	0	9	19	5	34	2	5.9
Wichita	10	5	4	4	3	5	5	4	22	74	136	74	346	18	5.2
Seward	0	0	1	0	0	0	0	1	0	0	3	0	5	2	40.0
Shawnee, except	1	0	0	1	0	0	0	2	0	1	5	0	10	2	20.0
Topeka	6	5	2	7	1	4	1	0	1	5	16	13	61	1	1.6
Sheridan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Sherman	0	2	1	0	0	0	0	1	0	0	0	1	5	1	20.0
Smith	0	3	0	0	2	0	0	0	0	1	0	0	6	0	0.0
Stafford	2	0	0	1	1	0	0	0	0	9	2	1	16	2	12.5
Stanton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Stevens	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0.0
Sumner	5	4	0	5	4	4	1	1	20	103	66	28	241	10	4.2
Thomas	0	4	0	0	0	0	0	0	0	0	0	0	4	0	0.0
Trego	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0.0
Wabaunsee	1	0	1	1	0	0	0	0	0	0	0	4	7	0	0.0
Wallace	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Washington	1	1	0	0	0	0	0	0	1	0	7	1	11	1	9.1
Wichita	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0.0
Wilson	11	4	0	4	0	3	1	0	6	42	30	23	124	5	4.0
Woodson	0	1	0	0	0	0	0	0	0	4	1	0	6	1	16.7
Wyandotte, except	1	3	0	0	0	2	0	0	4	18	20	10	58	9	15.5
Kansas City	27	19	22	16	7	11	3	14	21	56	76	52	324	18	5.6
Totals	220	126	135	103	77	61	59	109	386	1,192	1,204	703	4,375	259	5.9

DIPHTHERIA.

TABLE II.—Cases reported from counties and first-class cities during 1921, by months, with deaths and morbidity rates.

COUNTIES AND CITIES.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.	Deaths.	Morbidity per 100,000.
Allen	3	4	1	1	1	4	4	1	1	47	38	21	126	9	494.2
Anderson	3	2	0	0	0	0	0	0	5	14	29	1	54	4	427.0
Atchison, except	0	4	0	0	0	0	1	3	7	6	2	2	25	7	193.0
Atchison city	5	1	0	0	1	0	7	9	0	16	17	12	68	0	538.4
Barber	1	0	2	0	0	0	0	0	0	2	0	3	8	0	85.2
Barton	4	8	6	1	0	0	1	1	5	4	1	4	35	2	190.2
Bourbon, except	4	9	3	1	0	1	1	1	12	41	39	10	122	4	842.8
Fort Scott	40	38	25	10	15	10	2	3	15	45	45	32	280	7	2,618.5
Brown	2	5	10	2	4	1	0	0	1	5	7	12	49	0	236.3
Butler	29	9	10	1	11	10	15	17	56	101	91	45	395	14	934.1
Chase	0	0	1	1	0	0	0	0	4	1	1	4	12	0	191.8
Chautauqua	10	0	0	0	0	0	0	0	0	3	0	0	13	1	112.4
Cherokee	11	3	1	1	0	0	0	4	19	53	33	15	140	12	398.3
Cheyenne	0	1	1	0	1	0	0	1	2	5	1	0	12	2	209.4
Clark	0	0	0	0	1	0	0	0	0	4	5	4	14	0	278.8
Clay	2	1	1	1	0	0	0	0	6	17	3	6	37	0	235.7
Cloud	6	1	0	1	0	0	2	0	8	13	3	3	37	1	211.7
Coffey	3	2	1	1	0	0	0	0	1	5	12	0	25	3	166.5
Comanche	1	0	0	0	0	0	0	0	0	3	5	9	18	0	350.5
Cowley	9	2	0	0	5	1	9	6	14	33	35	19	133	7	364.8
Crawford, except	10	9	10	2	1	0	1	4	50	74	27	15	203	10	471.0
Pittsburg	6	3	0	1	0	1	0	3	2	19	34	17	86	7	476.4
Decatur	0	0	3	0	0	0	0	0	1	0	2	0	6	1	74.9
Dickinson	3	4	3	0	0	0	1	1	1	4	1	7	25	1	94.7
Doniphan	1	2	0	2	0	2	0	0	1	18	2	9	37	1	242.6
Douglas, except	1	1	0	2	0	0	0	1	3	14	4	1	27	1	213.3
Lawrence	2	0	1	2	0	0	0	0	6	9	9	5	34	7	273.0
Edwards	0	0	0	1	0	0	0	0	1	2	0	1	5	0	74.3
Elk	2	0	1	0	0	0	0	0	2	3	2	0	10	1	96.5
Ellis	8	3	0	3	2	0	0	1	0	9	3	6	35	6	231.1
Ellsworth	6	5	3	0	0	0	0	1	1	1	0	9	26	1	258.0
Finney	4	2	3	0	0	0	0	0	0	0	5	4	18	1	232.8
Ford	0	0	0	0	0	1	2	3	8	12	14	5	45	6	303.3
Franklin	0	7	2	0	0	0	2	0	27	70	22	9	139	9	604.8
Geary	2	0	11	25	5	0	0	0	1	3	2	12	71	1	582.3
Gove	0	0	2	0	0	0	0	0	0	0	0	0	2	2	39.9
Graham	0	0	0	0	0	0	0	0	1	6	10	10	27	3	360.6
Grant	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Gray	0	0	0	0	0	0	0	0	2	9	7	3	21	2	494.0

TABLE II.—DIPHTHERIA, 1921—CONCLUDED.

COUNTIES AND CITIES.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.	Deaths.	Morbidity per 100,000.
Greeley	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Greenwood	5	5	2	4	0	1	1	3	5	22	39	10	97	2	661.0
Hamilton	0	0	0	3	0	0	0	0	0	0	0	0	3	0	127.3
Harper	2	1	4	0	0	0	2	2	6	26	20	15	78	5	576.5
Harvey	2	5	1	1	0	0	2	1	2	14	7	1	36	0	175.0
Haskell	0	0	0	0	0	0	0	0	3	0	2	1	6	0	459.8
Hodgeman	7	2	1	0	0	0	6	0	0	0	1	0	17	0	453.1
Jackson	0	3	0	0	1	0	1	0	2	4	2	2	15	3	99.8
Jefferson	0	0	0	3	0	1	0	13	13	20	15	6	72	3	503.6
Jewell	0	0	0	0	1	0	0	0	2	2	7	8	20	1	127.4
Johnson	1	5	1	1	5	0	1	1	6	26	16	4	67	9	381.5
Kearny	1	0	0	0	0	0	0	0	0	0	1	0	2	0	79.0
Kingman	0	0	2	0	0	0	0	0	0	4	4	2	12	1	98.5
Kiowa	1	1	0	1	0	0	0	0	3	0	1	0	7	1	116.3
Labette, except	0	2	1	1	4	1	1	1	15	42	32	8	108	5	571.1
Parsons	9	5	3	0	5	2	1	3	3	5	9	10	55	3	343.1
Lane	0	0	0	0	0	0	0	0	0	0	7	0	7	1	270.7
Leavenworth, except	6	6	2	2	0	5	2	3	7	30	7	4	74	10	315.7
Leavenworth city	0	8	9	7	3	8	9	7	36	39	21	9	156	13	922.4
Lincoln	3	0	0	0	0	0	0	0	0	0	5	0	8	0	79.9
Linn	1	3	0	1	0	4	1	0	2	37	32	6	87	1	577.7
Logan	0	0	0	0	0	0	0	0	0	0	1	0	1	0	28.4
Lyon	7	6	2	0	0	2	1	3	15	67	37	39	179	7	680.0
Marion	7	3	1	0	1	0	0	2	2	9	20	8	53	0	218.0
Marshall	1	1	0	0	0	0	0	1	1	0	10	4	18	3	79.1
McPherson	0	3	1	2	0	0	0	0	3	3	0	1	13	4	60.8
Meade	0	0	2	1	0	0	0	0	1	0	0	0	4	0	73.9
Miami	7	5	6	0	2	2	0	0	25	45	29	20	141	1	781.8
Mitchell	0	0	1	0	0	0	0	0	0	1	1	1	4	0	29.5
Montgomery, except	24	4	5	8	5	1	4	1	46	81	46	15	240	19	608.0
Coffeyville	8	3	2	0	0	0	5	7	14	36	27	9	111	3	825.2
Morris	0	1	4	0	2	0	0	1	7	16	22	13	66	4	549.9
Morton	0	0	2	0	0	0	0	0	0	0	0	1	3	0	90.8
Nemaha	8	2	0	0	0	2	0	0	5	5	8	12	42	3	227.8
Neosho	4	3	2	4	0	1	4	1	9	65	18	17	128	7	532.0
Ness	0	0	0	0	0	0	1	0	1	1	2	2	7	1	98.3
Norton	1	0	2	0	0	0	0	0	1	1	3	0	8	3	71.3
Osage	1	0	0	0	2	0	0	2	14	46	9	6	80	5	396.5
Osborne	2	1	0	0	0	0	0	0	0	0	2	0	5	0	39.9
Ottawa	4	0	1	0	0	1	0	2	5	26	6	2	47	1	445.4
Pawnee	2	0	0	0	0	0	0	0	0	0	4	8	14	3	157.1

Phillips	0	0	0	0	0	0	0	0	3	6	2	0	11	1	90.0
Pottawatomie	5	2	1	0	0	0	0	2	4	7	1	5	27	1	174.2
Pratt	1	1	0	0	0	0	0	0	2	22	17	0	43	2	343.6
Rawlins	2	0	0	0	0	0	0	0	0	0	1	0	3	0	47.4
Reno, except	7	0	0	0	0	0	1	0	2	16	5	9	40	4	160.7
Hutchinson	11	9	6	1	12	3	4	14	29	65	62	26	242	10	1,038.7
Republic	2	0	2	0	0	0	0	0	1	8	18	9	40	2	258.6
Rice	6	2	3	0	0	7	0	2	4	7	12	7	50	3	341.4
Riley	0	1	0	8	5	1	0	0	2	1	2	0	20	0	117.5
Rooks	1	1	0	0	0	0	0	0	1	0	10	12	25	0	256.1
Rush	1	0	0	0	0	0	0	0	0	0	0	2	3	0	35.7
Russell	0	0	0	2	1	1	0	0	5	2	8	18	37	3	349.7
Saline, except	0	1	2	1	1	1	0	0	1	5	0	6	18	0	181.8
Salina	12	8	0	5	5	4	1	1	4	2	10	6	58	4	384.5
Scott	0	0	0	0	0	0	0	0	0	0	0	3	3	1	96.0
Sedgwick, except	5	0	3	2	0	0	1	0	7	31	5	22	76	5	301.1
Wichita	70	23	21	18	12	21	21	19	90	216	93	64	668	23	925.0
Seward	3	1	0	0	0	0	0	5	3	7	2	4	25	1	395.1
Shawnee, except	1	1	0	0	0	0	1	5	60	98	44	17	227	8	1,653.7
Topeka	17	9	4	5	0	4	7	50	160	270	175	67	768	13	1,535.3
Sheridan	0	0	2	0	0	0	0	0	0	0	0	0	2	0	36.3
Sherman	0	0	0	0	0	0	0	0	0	2	0	0	2	0	35.5
Smith	0	0	2	0	0	1	0	0	0	1	0	1	5	0	33.3
Stafford	1	2	0	0	3	0	0	0	0	7	7	12	32	2	280.0
Stanton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Stevens	0	2	0	0	0	0	0	1	0	0	0	0	3	0	78.9
Sumner	13	4	0	1	2	0	0	1	21	41	42	33	158	2	557.0
Thomas	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Trego	0	0	0	0	0	0	0	0	0	0	0	2	2	1	32.8
Wabaunsee	0	0	2	1	6	1	1	2	5	19	26	5	68	1	615.1
Wallace	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Washington	2	0	0	0	0	0	0	0	0	2	8	5	17	2	98.0
Wichita	0	0	0	0	0	0	1	0	0	0	0	0	1	0	54.9
Wilson	2	1	1	3	0	0	0	2	28	74	40	14	165	4	769.6
Woodson	0	0	1	0	0	1	1	1	9	22	24	10	69	2	757.2
Wyandotte, except	9	6	4	4	1	0	0	0	11	10	6	5	56	5	278.9
Kansas City	51	25	21	18	15	6	6	16	46	117	71	29	421	21	416.1
Totals	514	303	246	185	142	113	135	235	1,016	2,402	1,675	952	7,882	376	443.53

MEASLES.

TABLE III.—Cases reported from counties and first-class cities during 1920, by months, with deaths and case fatalities.

Counties and Cities.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Totals.	Deaths.	Case fatality.
Allen	0	8	1	3	24	14	0	0	0	0	0	1	51	1	1.9
Anderson	2	12	7	12	0	0	0	0	0	1	0	0	34	4	11.8
Atchison, except	2	0	1	0	0	0	1	0	0	0	0	0	4	0	0.0
Atchison city	0	0	0	1	1	1	1	1	0	0	0	3	8	0	0.0
Barber	0	1	0	0	1	0	0	1	0	0	0	0	3	0	0.0
Barton	0	0	6	2	1	1	1	0	1	2	2	4	20	0	0.0
Bourbon, except	0	4	6	1	7	7	0	1	0	4	3	0	33	1	3.0
Fort Scott	0	1	15	18	20	5	0	0	0	0	0	0	59	0	0.0
Brown	2	10	0	11	35	12	0	0	0	0	0	0	70	1	1.4
Butler	11	14	30	66	36	27	11	0	0	0	0	4	199	1	0.5
Chase	0	4	32	32	19	4	2	0	0	0	1	0	94	0	0.0
Chautauqua	0	1	0	0	0	0	1	3	0	0	0	0	5	0	0.0
Cherokee	4	6	8	10	45	5	1	0	0	0	0	0	79	6	7.6
Cheyenne	5	0	1	1	1	1	0	0	0	0	0	0	9	1	11.1
Clark	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Clay	3	1	0	0	3	1	0	0	0	0	0	8	16	0	0.0
Cloud	1	0	1	1	1	0	0	0	0	0	0	0	4	0	0.0
Coffey	2	2	0	9	0	1	0	0	0	0	0	0	14	0	0.0
Comanche	0	9	0	0	0	0	0	0	0	0	0	0	9	1	11.1
Cowley	4	3	9	11	35	32	10	7	0	0	1	3	115	4	3.5
Crawford, except	0	1	0	16	6	1	4	2	0	0	2	8	40	0	0.0
Pittsburg	2	1	0	0	9	4	1	5	0	0	0	0	22	0	0.0
Decatur	0	0	0	4	10	1	1	0	0	0	0	1	17	0	0.0
Dickinson	1	1	11	7	7	3	5	0	7	6	0	1	49	0	0.0
Doniphan	30	33	1	6	1	1	2	0	0	0	1	2	77	0	0.0
Douglas	1	1	3	37	40	3	1	0	0	0	0	1	87	0	0.0
Edwards	0	0	0	3	5	1	0	0	0	0	0	0	9	0	0.0
Elk	0	1	0	0	0	0	0	0	0	0	0	1	2	0	0.0
Ellis	1	0	0	2	1	0	1	0	0	8	20	21	54	2	3.7
Ellsworth	6	22	3	0	0	3	7	0	0	1	1	0	43	1	2.3
Finney	1	0	0	0	0	1	0	0	0	0	0	0	2	1	50.0
Ford	0	0	16	53	14	3	6	0	0	0	1	0	93	1	1.1
Franklin	1	12	4	25	10	0	0	0	0	0	0	1	53	1	1.9
Geary	0	0	1	0	2	0	5	0	5	4	0	0	17	0	0.0
Gove	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0.0
Graham	2	1	0	0	2	0	0	0	0	0	0	1	6	0	0.0
Grant	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0.0
Gray	0	0	0	0	0	0	0	0	3	0	0	0	3	0	0.0
Greeley	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0.0
Greenwood	32	17	8	0	2	3	0	0	0	1	0	6	69	2	2.9
Hamilton	1	0	0	0	0	0	1	0	0	0	0	0	2	0	0.0

Harper	0	0	1	0	1	1	0	0	0	0	0	0	3	0	0.0
Harvey	6	3	1	1	2	1	0	0	0	0	0	6	20	0	0.0
Haskell	0	0	0	1	1	0	0	0	0	0	0	0	2	0	0.0
Hodgeman	0	0	1	0	2	6	0	0	0	0	0	0	9	0	0.0
Jackson	0	0	0	1	0	0	0	0	0	0	0	0	1	1	100.0
Jefferson	0	0	1	0	0	1	0	0	1	5	28	59	95	2	2.1
Jewell	1	1	0	8	0	0	0	0	0	0	0	0	10	0	0.0
Johnson	2	6	14	33	20	1	0	0	0	0	0	0	76	0	0.0
Kearny	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0.0
Kingman	0	0	0	0	1	0	1	0	0	0	0	0	2	1	50.0
Kiowa	7	3	0	0	1	2	0	0	0	0	0	0	13	0	0.0
Labette, except	3	15	0	0	1	0	1	0	0	0	0	0	20	1	5.0
Parsons	4	5	0	2	7	0	0	0	0	1	0	0	19	0	0.0
Lane	0	0	0	0	17	0	0	0	0	0	0	0	17	0	0.0
Leavenworth, except	0	0	0	1	6	3	0	0	0	0	0	1	11	0	0.0
Leavenworth city	0	0	3	0	0	0	1	1	2	0	0	0	7	0	0.0
Lincoln	0	0	0	1	7	0	0	0	0	0	1	0	9	0	0.0
Linn	30	23	7	11	18	5	1	0	0	1	0	18	114	0	0.0
Logan	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0.0
Lyon	0	3	2	14	26	26	4	1	15	25	46	30	192	2	1.0
Marion	0	1	2	28	54	32	4	3	0	0	0	2	126	0	0.0
Marshall	0	4	1	10	63	26	3	0	0	0	1	6	114	2	1.8
McPherson	0	0	0	0	1	6	1	0	0	0	0	2	10	0	0.0
Meade	0	0	3	3	1	1	0	0	0	0	0	0	8	0	0.0
Miami	1	32	48	29	5	0	0	0	0	0	0	0	115	2	1.7
Mitchell	0	1	0	0	3	1	1	0	0	0	0	0	6	0	0.0
Montgomery, except	2	2	27	81	28	21	4	1	0	0	1	0	167	4	2.4
Coffeyville	1	11	23	18	18	10	8	2	0	0	0	0	91	7	7.7
Morris	1	4	3	1	0	1	0	0	0	0	0	0	10	1	10.0
Morton	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0.0
Nemaha	0	0	1	4	0	0	1	0	0	0	0	1	7	0	0.0
Neosho	16	13	10	4	10	11	2	0	0	7	4	11	88	0	0.0
Ness	0	0	0	0	0	0	0	3	0	0	0	0	3	0	0.0
Norton	0	1	0	20	15	15	9	0	0	0	0	0	60	0	0.0
Osage	0	0	6	16	22	0	0	0	0	0	4	0	48	1	2.1
Osborne	4	0	0	3	1	5	0	0	0	0	1	6	20	0	0.0
Ottawa	8	2	0	0	0	0	0	0	3	4	1	0	18	0	0.0
Pawnee	0	0	1	0	1	4	2	0	0	0	0	0	8	0	0.0
Phillips	0	0	3	0	30	3	3	0	1	0	0	0	40	0	0.0
Pottawatomie	3	1	6	0	0	0	0	0	0	0	15	18	43	0	0.0
Pratt	40	30	16	1	1	1	3	0	0	0	1	0	93	1	1.1
Rawlins	1	1	3	9	16	2	0	0	0	0	0	0	31	0	0.0
Reno, except	0	1	0	1	3	0	3	0	0	0	0	0	8	0	0.0
Hutchinson	0	3	9	46	45	25	2	0	1	0	0	1	132	1	0.76
Republic	0	0	7	0	0	4	1	0	0	0	0	0	12	0	0.0
Rice	8	0	1	11	4	1	1	0	0	0	0	0	26	0	0.0
Riley	0	13	45	40	27	12	0	0	0	0	0	3	140	0	0.0
Rooks	0	1	0	0	5	0	0	0	1	1	0	1	9	1	11.1
Rush	0	0	0	0	1	14	8	1	0	0	1	0	25	1	4.0

TABLE III.—MEASLES, 1920—CONTINUED.

COUNTIES AND CITIES.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Totals.	Deaths.	Case fatality.
Russell	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0.0
Saline	2	8	2	9	26	9	0	5	0	0	1	6	68	0	0.0
Scott	0	0	0	0	0	2	0	0	0	0	0	0	2	0	0.0
Sedgwick, except	0	0	0	11	6	0	1	0	0	1	0	0	19	2	10.5
Wichita	2	10	12	57	52	46	38	9	2	0	0	5	233	2	0.86
Seward	0	0	2	0	0	0	0	0	0	0	0	0	2	0	0.0
Shawnee, except	0	0	4	2	4	0	1	0	0	37	32	25	105	0	0.0
Topeka	2	2	23	125	179	140	12	0	9	62	334	457	1,345	1	0.0
Sheridan	0	0	0	1	3	2	0	0	1	1	0	12	20	0	0.0
Sherman	0	0	0	0	0	1	1	0	0	0	0	0	2	0	0.0
Smith	0	0	3	18	4	2	0	0	0	4	0	1	32	0	0.0
Stafford	0	0	0	2	7	0	1	0	0	0	0	2	12	0	0.0
Stanton	0	0	2	0	0	0	0	0	0	0	0	0	2	0	0.0
Stevens	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Sumner	1	3	0	1	12	10	1	0	2	0	0	2	32	0	0.0
Thomas	3	5	0	0	0	0	0	0	0	0	0	0	8	0	0.0
Trego	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0.0
Wabaunsee	0	2	2	14	2	0	0	0	2	23	2	14	61	0	0.0
Wallace	0	1	0	0	0	1	0	0	0	0	0	0	2	0	0.0
Washington	0	0	0	0	0	0	0	0	8	0	1	2	11	2	18.2
Wichita	0	0	7	0	0	0	0	0	0	0	0	0	7	0	0.0
Wilson	0	6	3	1	31	50	22	2	0	2	126	93	336	2	0.6
Woodson	0	0	0	1	0	1	0	0	0	0	0	0	2	0	0.0
Wyandotte, except	0	3	8	3	0	0	1	0	0	0	0	0	15	1	6.7
Kansas City	62	162	133	115	181	80	5	2	1	6	6	3	756	18	2.4
Totals	325	548	611	1,089	1,309	721	210	50	65	207	640	857	6,632	84	1.3

MEASLES.

TABLE IV.—Cases reported from counties and first-class cities during 1921, by months, with deaths and morbidity rates.

COUNTIES AND CITIES.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Totals.	Deaths.	Morbidity per 100,000.
Allen	3	1	2	13	17	1	0	0	0	0	1	0	38	0	149.0
Anderson	1	7	0	0	0	0	0	0	0	0	1	0	9	0	71.1
Atchison, except	0	0	0	3	16	7	0	0	0	0	0	0	26	0	200.7
Atchison city	0	2	1	1	0	1	0	0	0	0	0	0	5	0	39.6
Barber	0	0	4	2	0	0	0	0	0	0	0	0	6	0	63.9
Barton	0	1	40	81	97	9	6	0	0	0	0	0	234	1	1,434.6
Bourbon, except	1	0	2	2	0	0	0	0	0	0	0	0	5	0	34.5
Fort Scott	1	2	1	2	2	0	0	0	0	0	0	0	8	0	74.8
Brown	1	1	17	1	0	1	0	0	0	0	0	0	21	0	101.3
Butler	30	58	54	50	76	16	1	0	1	1	2	1	290	3	685.8
Chase	4	4	0	0	0	0	0	0	0	0	0	0	8	0	127.9
Chautauqua	2	0	0	1	0	0	0	0	0	0	0	0	3	0	25.9
Cherokee	0	0	4	18	28	3	0	0	0	1	0	0	54	0	153.6
Cheyenne	11	1	0	3	0	0	0	1	0	0	0	0	16	0	279.2
Clark	1	0	0	0	0	1	0	0	0	0	0	0	2	0	39.8
Clay	28	31	68	38	5	1	0	0	0	0	1	0	172	0	1,095.8
Cloud	0	10	5	22	7	6	2	0	0	0	1	1	54	0	309.0
Coffey	11	36	15	4	5	0	0	1	0	0	0	0	72	1	479.5
Comanche	0	0	0	0	49	0	1	0	0	0	1	0	51	0	993.0
Cowley	15	16	47	70	51	14	4	0	1	0	2	0	220	2	603.4
Crawford, except	4	25	52	9	5	11	2	0	0	0	0	0	108	0	250.6
Pittsburg	0	0	9	66	35	3	0	0	0	0	0	0	113	0	626.0
Decatur	3	0	4	1	1	0	0	0	0	0	0	0	9	0	112.3
Dickinson	2	1	7	0	0	0	0	1	1	0	0	1	13	0	49.3
Doniphan	0	0	2	12	8	0	0	0	0	0	0	0	22	1	144.7
Douglas, except	6	6	2	1	1	1	0	0	0	0	0	0	17	0	134.3
Lawrence	1	1	5	1	5	1	2	0	1	0	1	2	20	0	160.6
Edwards	1	1	3	6	6	0	0	1	0	0	0	0	18	2	267.3
Elk	3	2	0	4	8	0	0	0	1	0	0	0	18	0	173.7
Ellis	11	5	11	5	16	0	0	0	1	0	0	0	49	5	323.5
Ellsworth	3	3	8	12	16	9	3	0	0	0	0	0	54	1	535.9
Finney	0	0	1	4	3	0	0	0	0	0	0	0	8	0	103.5
Ford	1	15	45	15	8	0	1	0	0	1	0	0	86	0	5,9.6
Franklin	36	7	15	3	0	0	1	0	0	1	0	0	63	0	274.1
Geary	7	3	1	28	35	3	0	0	0	1	2	1	81	0	664.3
Gove	12	46	91	0	0	0	0	0	0	0	0	0	149	0	2,974.6
Graham	2	6	9	25	28	0	0	0	0	0	0	0	70	0	934.8
Grant	0	1	0	0	0	0	0	0	0	0	0	0	1	0	87.6
Gray	2	18	0	0	3	10	0	0	0	0	0	0	33	1	776.3
Greeley	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Greenwood	4	14	18	64	11	0	0	0	0	0	1	0	112	0	763.3

TABLE IV.—MEASLES, 1921—CONTINUED.

COUNTIES AND CITIES.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Totals.	Deaths.	Morbidity per 100,000.
Hamilton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Harper	0	2	27	13	0	3	0	0	0	0	0	0	45	1	332.5
Harvey	210	67	26	9	2	2	0	0	0	0	0	0	316	1	1,536.5
Haskell	0	21	0	0	0	0	0	0	0	0	0	0	21	0	1,609.2
Hodgeman	4	0	14	34	7	3	0	0	0	0	0	0	62	0	1,652.5
Jackson	15	5	10	1	2	0	0	0	0	0	0	0	33	1	219.7
Jefferson	48	1	1	0	0	0	0	0	0	0	0	0	50	0	349.7
Jewell	11	22	15	6	1	1	3	0	0	0	0	1	60	0	382.3
Johnson	3	1	3	1	0	0	0	0	0	1	1	0	10	2	56.9
Kearny	0	0	1	0	0	0	0	1	0	0	0	0	2	0	79.0
Kingman	3	4	5	17	16	0	0	0	0	0	0	0	45	0	369.4
Kiowa	0	0	3	36	9	0	1	0	0	0	0	0	49	0	814.4
Labette, except	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Parsons	0	0	1	2	3	2	0	0	0	0	0	0	8	0	49.9
Lane	3	5	4	0	1	0	0	0	0	0	0	0	13	0	502.7
Leavenworth, except	3	1	1	2	2	0	0	0	0	0	0	1	10	0	42.7
Leavenworth city	0	2	25	42	30	5	0	0	0	0	0	0	104	1	614.9
Lincoln	3	0	3	12	0	0	0	0	0	0	1	0	19	0	189.7
Linn	33	0	8	3	0	0	0	0	0	0	0	0	44	2	292.2
Logan	0	1	0	1	1	0	0	0	0	0	0	0	3	0	85.4
Lyon	62	28	18	24	5	3	0	0	0	0	0	0	140	1	532.0
Marion	6	4	11	34	24	2	0	0	0	0	1	1	83	1	341.0
Marshall	5	0	6	12	8	1	0	0	0	0	2	1	35	1	154.0
McPherson	16	36	12	11	2	1	0	0	0	0	0	0	78	0	366.0
Meade	0	16	3	4	0	0	0	0	0	0	0	0	23	1	426.0
Miami	14	3	0	0	0	0	0	0	0	0	0	0	17	0	94.3
Mitchell	2	46	51	52	10	2	0	0	0	0	0	0	163	1	1,202.1
Montgomery, except	7	36	59	36	8	0	0	0	0	0	0	1	147	3	372.6
Coffeyville	1	0	2	0	1	0	0	0	2	1	0	1	8	0	59.5
Morris	2	3	3	20	28	8	0	0	0	0	0	0	64	0	533.2
Morton	0	0	3	4	0	0	0	0	1	0	0	0	8	2	242.1
Nemaha	1	0	0	0	1	4	0	0	0	0	0	0	6	0	32.5
Neosho	10	62	61	13	2	2	0	0	0	0	0	0	150	4	623.4
Ness	0	1	10	23	11	0	0	0	0	0	0	0	45	1	631.8
Norton	1	0	5	1	7	0	0	0	1	0	0	0	15	1	133.6
Osage	4	9	17	0	0	6	0	0	0	0	0	0	36	0	178.4
Osborne	8	25	20	7	3	0	0	0	0	1	0	0	64	3	511.3
Ottawa	3	67	68	207	32	1	0	0	1	1	0	0	380	1	3,601.0
Pawnee	0	1	64	87	23	11	1	0	0	0	0	0	187	1	2,097.8
Phillips	0	5	9	85	14	0	0	0	0	0	0	0	113	0	924.6
Pottawatomie	9	7	56	0	0	0	0	0	0	0	0	0	72	1	464.7

Pratt	0	4	8	44	19	7	2	0	0	0	1	0	85	0	679.1
Rawlins	0	0	0	2	6	1	1	0	0	0	0	1	11	1	173.7
Reno, except	13	10	5	8	1	0	0	0	0	0	0	0	37	1	148.6
Hutchinson	16	36	30	32	38	12	2	0	2	0	1	2	171	1	734.0
Republic	3	0	4	11	7	0	0	0	0	0	0	1	25	0	161.6
Rice	0	1	6	6	19	14	4	0	2	0	0	0	52	0	355.0
Riley	19	16	9	27	3	0	0	0	1	0	3	0	78	0	458.4
Rooks	5	11	6	22	6	2	0	0	0	0	2	0	54	3	553.3
Rush	41	44	0	12	11	5	12	0	0	0	0	1	126	0	1,500.2
Russell	20	60	20	42	11	1	0	0	0	0	0	0	153	3	1,446.3
Saline, except	0	11	5	0	2	0	0	0	0	0	0	0	18	1	181.8
Salina	123	22	10	1	2	1	1	0	0	0	0	0	160	4	1,060.6
Scott	0	0	2	0	0	0	0	0	0	0	0	0	2	0	64.0
Sedgwick, except	1	0	15	22	9	0	1	0	0	0	0	0	48	1	190.2
Wichita	7	196	575	482	382	52	4	1	4	1	0	3	1,707	9	2,363.7
Seward	0	0	4	1	0	0	0	0	0	0	0	0	5	0	79.0
Shawnee, except	41	9	7	0	0	0	0	0	0	0	0	0	57	1	415.2
Topeka	288	127	57	11	6	1	0	0	0	0	1	1	492	6	983.6
Sheridan	67	13	18	2	2	0	0	0	0	0	0	0	103	1	1,869.3
Sherman	0	0	1	0	0	0	0	0	0	0	0	0	1	0	17.7
Smith	26	40	81	19	6	0	0	0	0	0	1	0	173	0	1,151.7
Stafford	0	8	7	5	38	0	0	0	0	0	0	0	58	0	507.6
Stanton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Stevens	1	0	25	1	0	0	0	0	0	0	0	0	27	0	710.2
Sumner	12	11	70	322	39	5	0	0	0	0	1	0	460	0	1,621.7
Thomas	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Trego	0	11	0	0	1	3	0	0	0	0	0	0	15	0	245.7
Wabaunsee	22	9	12	2	5	0	0	1	0	0	0	0	51	1	461.3
Wallace	1	5	3	0	0	0	0	0	0	0	0	0	9	0	419.2
Washington	6	9	0	0	0	1	0	0	0	0	0	1	17	0	98.0
Wichita	0	0	0	0	0	1	0	0	0	0	0	0	1	0	54.9
Wilson	93	47	26	9	2	0	0	0	0	0	0	0	177	0	825.6
Woodson	1	59	0	0	0	0	0	0	0	0	0	0	60	1	658.5
Wyandotte, except	0	2	3	1	1	0	0	0	0	0	1	0	8	0	39.8
Kansas City	7	33	80	74	60	15	1	0	1	1	2	1	275	0	271.8
Totals	1,507	1,599	2,255	2,524	1,472	276	56	7	21	11	31	23	9,782	81	550.45

SCARLET FEVER.

TABLE V.—Cases reported from counties and first-class cities during 1920, by months, with deaths and case fatalities.

COUNTIES AND CITIES.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Totals.	Deaths.	Case fatality.
Allen	14	4	6	1	1	1	2	2	5	1	10	1	48	0	0.0
Anderson	0	2	0	0	0	0	1	7	3	4	11	1	29	2	6.9
Atchison, except	2	6	6	1	1	0	0	0	0	5	11	0	32	2	6.2
Atchison city	6	5	2	0	0	7	0	0	0	1	0	0	21	1	4.8
Barber	2	3	8	0	0	0	1	1	3	13	13	6	50	1	2.0
Barton	10	0	0	0	2	1	6	0	2	4	14	11	50	1	2.0
Bourbon, except	5	6	0	1	3	0	1	2	4	15	14	13	64	2	3.1
Fort Scott	1	0	0	3	0	0	0	0	0	0	0	2	6	0	0.0
Brown	15	5	7	8	1	1	0	1	2	8	4	11	63	0	0.0
Butler	15	10	3	12	5	4	2	6	9	14	16	17	113	1	0.89
Chase	1	5	3	4	0	0	0	2	1	5	11	7	39	1	2.6
Chautauqua	2	0	3	8	1	0	0	0	0	1	4	1	20	0	0.0
Cherokee	8	9	8	6	0	0	3	0	7	12	12	3	68	5	7.4
Cheyenne	0	1	0	0	1	0	0	3	2	5	5	2	19	0	0.0
Clark	1	0	2	0	0	0	0	0	0	1	2	4	10	0	0.0
Clay	10	4	4	5	4	0	0	0	0	7	12	5	51	1	2.0
Cloud	9	2	4	1	1	1	1	4	1	5	7	0	36	2	5.6
Coffey	7	10	10	6	26	2	0	0	2	6	15	13	97	0	0.0
Comanche	0	0	0	0	0	0	0	0	2	2	0	0	4	1	25.0
Cowley	6	12	9	2	2	2	2	5	26	55	34	20	175	1	0.57
Crawford, except	6	2	5	0	0	0	0	0	2	19	6	7	47	2	4.3
Pittsburg	4	1	4	1	4	0	0	3	3	9	6	3	38	0	0.0
Decatur	22	4	0	0	0	0	0	0	1	0	0	3	30	0	0.0
Dickinson	9	5	6	3	12	3	5	5	11	32	17	7	115	3	2.6
Doniphan	10	4	10	6	1	5	0	4	0	2	5	12	59	1	1.7
Douglas	4	5	1	1	0	1	1	3	4	8	12	7	47	3	6.4
Edwards	3	8	1	0	7	0	0	0	1	6	0	5	31	2	6.5
Elk	0	0	0	0	0	0	0	2	3	4	0	2	11	0	0.0
Ellis	0	0	0	1	1	0	0	1	1	5	3	1	13	1	7.7
Ellsworth	4	1	0	1	0	0	0	1	0	3	0	0	10	0	0.0
Finney	1	0	3	3	0	0	0	0	0	2	9	8	26	0	0.0
Ford	16	17	13	18	0	0	5	12	2	7	1	12	103	3	2.9
Franklin	2	0	2	1	1	0	3	6	4	3	6	3	31	1	3.2
Geary	6	1	2	2	2	4	7	11	9	15	9	12	80	2	2.5
Gove	0	0	0	0	0	0	0	0	0	0	0	6	6	0	0.0
Graham	0	0	1	0	1	0	0	0	2	2	17	6	29	0	0.0
Grant	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Gray	6	8	1	4	1	2	2	2	3	8	10	9	56	2	3.6
Greeley	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Greenwood	0	0	0	1	0	0	2	0	2	9	10	8	32	0	0.0
Hamilton	0	0	0	0	3	0	0	0	0	0	0	0	3	0	0.0

Harper	11	6	2	1	0	0	0	1	1	4	11	5	42	0	0.0
Harvey	4	0	4	1	1	5	1	1	1	3	1	4	26	0	0.0
Haskell	0	0	0	0	1	0	0	1	0	0	0	0	2	1	50.0
Hodgeman	2	0	0	1	2	1	0	2	0	0	0	0	8	0	0.0
Jackson	2	6	9	1	0	0	0	1	0	7	1	1	28	0	0.0
Jefferson	12	8	3	5	1	0	0	0	0	4	5	0	38	0	0.0
Jewell	4	1	1	0	0	0	0	0	2	0	3	1	12	0	0.0
Johnson	6	1	6	5	0	1	1	3	0	3	5	7	38	1	2.6
Kearny	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0.0
Kingman	15	0	1	1	0	0	0	1	0	10	12	9	49	0	0.0
Kiowa	6	2	2	3	0	3	0	4	4	8	13	26	71	0	0.0
Labette, except	4	5	0	6	0	0	0	0	1	6	1	0	23	0	0.0
Parsons	7	1	2	2	3	3	0	0	1	12	7	4	42	1	2.4
Lane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Leavenworth, except	0	0	0	2	1	0	1	0	4	1	0	1	10	0	0.0
Leavenworth city	2	0	1	1	2	0	0	1	1	1	1	6	16	0	0.0
Lincoln	29	12	4	0	1	3	0	1	0	7	10	0	67	1	1.5
Linn	1	1	0	0	0	0	0	3	3	24	18	6	56	1	1.8
Logan	0	0	2	0	0	0	0	0	0	3	0	1	6	0	0.0
Lyon	4	3	2	6	1	0	2	0	6	20	27	24	95	3	3.2
Marion	9	7	4	10	1	0	3	9	13	23	30	10	119	2	1.7
Marshall	2	0	4	0	2	0	2	1	3	2	1	12	29	2	6.9
McPherson	2	4	0	0	1	1	0	0	0	3	4	11	26	2	7.7
Meade	1	0	0	3	1	3	3	0	2	16	7	7	43	1	2.3
Miami	0	1	0	2	1	1	1	0	1	2	1	1	11	0	0.0
Mitchell	0	0	0	0	0	0	0	0	5	7	5	8	25	0	0.0
Montgomery, except	4	0	4	1	3	1	2	3	3	12	19	9	61	0	0.0
Coffeyville	5	3	6	4	5	1	0	1	1	7	4	3	40	0	0.0
Morris	10	5	2	3	0	1	3	1	2	17	7	7	58	0	0.0
Morton	3	8	5	0	1	1	0	1	0	2	5	1	27	2	7.4
Nemaha	4	0	3	3	1	0	0	4	1	8	3	2	29	2	6.9
Neosho	8	6	3	0	8	0	3	1	9	29	30	18	115	2	1.3
Ness	1	0	0	0	0	0	0	0	2	8	2	1	14	0	0.0
Norton	8	0	1	1	0	0	0	0	2	1	0	2	15	0	0.0
Osage	6	6	3	0	0	0	0	0	0	10	3	5	33	2	6.1
Osborne	3	0	0	0	0	0	0	1	5	0	1	0	10	0	0.0
Ottawa	29	0	0	0	1	2	0	1	2	3	5	1	44	1	2.3
Pawnee	2	3	1	11	2	0	3	0	0	15	7	15	59	1	1.7
Phillips	3	0	1	0	0	0	0	4	1	10	3	5	27	2	7.4
Pottawatomie	1	0	0	0	1	0	0	1	1	5	10	16	35	2	5.7
Pratt	18	9	4	2	0	1	4	0	15	33	47	43	176	1	0.57
Rawlins	0	3	5	1	4	0	2	0	4	5	10	3	37	2	5.4
Reno, except	21	5	4	1	1	0	1	7	0	14	19	15	88	1	1.1
Hutchinson	8	7	4	8	3	5	1	0	7	15	13	3	74	1	1.4
Republic	0	0	1	1	0	0	0	0	0	2	3	5	12	0	0.0
Rice	5	0	8	5	3	2	2	2	9	15	8	9	68	0	0.0
Riley	10	4	2	4	0	0	1	1	1	2	3	2	30	0	0.0
Rooks	1	3	0	0	0	1	0	1	6	7	4	4	27	1	3.7
Rush	0	1	0	0	0	0	1	0	0	0	1	0	3	0	0.0

TABLE V.—SCARLET FEVER, 1920—CONTINUED.

COUNTIES AND CITIES.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Totals.	Deaths.	Case fatality.
Russell	0	0	2	0	0	0	0	0	0	0	2	4	8	0	0.0
Saline	11	1	6	4	3	1	6	3	9	8	17	18	87	3	3.5
Scott	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0.0
Sedgwick, except	5	2	7	8	3	1	0	2	1	5	6	8	48	1	2.1
Wichita	10	8	4	6	4	7	6	15	19	48	57	37	221	3	1.4
Seward	1	0	37	35	2	0	1	0	0	5	2	6	89	2	2.2
Shawnee, except	1	5	1	0	0	0	4	16	3	13	6	8	57	2	3.5
Topeka	11	4	4	0	5	2	0	6	16	33	36	34	121	0	0.0
Sheridan	0	0	0	8	0	0	0	5	1	0	12	16	42	0	0.0
Sherman	0	0	0	0	0	0	0	2	0	5	6	0	13	0	0.0
Smith	1	1	0	0	0	0	0	0	7	4	3	0	16	0	0.0
Stafford	5	7	9	3	0	0	3	0	0	3	7	7	44	2	4.5
Stanton	4	0	0	0	0	0	0	0	0	0	0	0	4	0	0.0
Stevens	0	0	2	0	0	0	1	1	0	0	0	1	5	0	0.0
Sumner	42	8	13	10	3	1	4	8	26	47	21	20	203	1	0.49
Thomas	2	0	0	0	0	0	0	0	0	0	0	0	2	0	0.0
Trego	1	1	1	0	0	0	0	0	0	0	0	4	7	0	0.0
Wabaunsee	9	2	5	1	1	1	0	3	4	8	13	9	56	0	0.0
Wallace	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Washington	4	1	4	0	0	0	0	0	0	3	2	5	19	1	5.3
Wichita	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Wilson	1	0	3	1	0	1	1	4	2	22	14	14	63	1	1.6
Woodson	5	5	2	8	7	0	0	0	3	17	10	11	68	1	1.5
Wyandotte, except	0	3	1	0	1	1	0	0	2	1	4	0	13	0	0.0
Kansas City	18	17	19	6	16	0	3	6	11	21	20	9	146	3	2.1
Totals	612	326	348	285	178	85	110	212	340	927	906	762	5,091	96	1.9

SCARLET FEVER.

TABLE VI.—Cases reported from countie and first-class cities during 1921, by months, with deaths and morbidity rates.

COUNTIES AND CITIES.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.	Deaths.	Morbidity per 100,000.
Allen	0	3	3	0	1	3	0	0	3	15	15	5	48	3	182.3
Anderson	9	3	5	5	8	2	0	3	3	8	10	4	60	4	474.4
Atchison, except	3	1	1	0	1	0	0	2	0	1	0	4	13	0	100.4
Atchison city	1	1	11	4	0	1	1	0	3	7	5	5	39	0	308.8
Barber	5	1	0	6	0	0	2	1	3	2	9	8	37	0	393.9
Barton	5	7	7	10	3	5	2	5	1	14	9	23	91	1	494.5
Bourbon, except	3	0	1	9	1	0	1	1	3	7	6	2	34	0	234.9
Fort Scott	5	2	3	0	0	3	0	7	1	13	6	3	43	0	402.1
Brown	9	12	3	4	1	3	0	3	2	10	13	9	69	1	332.8
Butler	14	8	10	5	23	5	6	14	7	17	12	6	127	1	300.3
Chase	1	0	0	2	0	1	0	0	2	3	6	3	18	0	287.7
Chautauqua	0	0	0	1	0	0	0	0	0	2	0	0	3	0	25.9
Cherokee	6	4	4	0	0	0	0	1	7	9	7	11	49	1	139.4
Cheyenne	0	3	3	13	2	1	1	0	0	5	7	1	36	1	628.2
Clark	0	5	0	0	0	0	0	0	0	0	1	1	7	0	139.4
Clay	6	7	1	4	2	0	0	0	3	15	13	12	63	3	401.4
Cloud	9	4	9	2	6	0	1	2	13	34	24	20	124	2	709.5
Coffey	14	4	1	1	2	1	1	0	4	2	7	0	37	0	246.4
Comanche	2	0	0	0	0	0	0	0	1	1	7	5	16	0	311.5
Cowley	13	7	14	9	16	5	4	9	8	16	24	20	145	1	397.7
Crawford, except	8	6	0	0	2	0	0	4	5	23	15	10	73	3	169.4
Pittsburg	3	4	5	1	1	1	3	3	1	12	8	3	45	0	249.3
Decatur	10	4	7	3	18	2	0	3	3	3	3	3	59	0	736.1
Dickinson	20	14	10	4	3	1	3	9	11	30	30	19	154	3	583.6
Doniphan	3	10	0	5	0	0	1	0	3	4	9	7	42	0	275.4
Douglas, except	1	1	0	0	0	0	0	1	1	4	2	0	10	0	79.0
Lawrence	2	1	4	4	1	0	0	0	2	17	12	12	55	1	441.6
Edwards	10	5	7	3	2	0	2	2	3	2	0	2	38	2	564.3
Elk	2	1	3	4	2	0	1	1	2	1	1	0	18	0	173.7
Ellis	3	5	3	4	0	0	0	0	0	5	6	4	30	0	198.0
Ellsworth	0	0	3	0	0	0	0	2	1	1	2	1	10	1	99.3
Finney	7	8	4	2	0	0	0	0	0	0	2	1	24	0	310.2
Ford	14	18	4	2	4	2	2	2	2	12	13	11	86	1	579.6
Franklin	3	1	2	1	2	0	2	4	3	1	10	9	38	1	166.4
Geary	8	4	8	6	3	0	4	5	3	19	3	29	92	1	754.5
Gove	9	0	0	0	0	0	1	0	0	0	2	0	12	0	239.6
Graham	4	6	1	2	0	0	0	1	1	22	4	5	46	1	614.3
Grant	1	2	1	2	0	0	0	0	0	0	0	1	7	0	613.0
Gray	6	1	0	2	2	1	0	0	3	1	2	6	24	0	564.6

TABLE VI.—SCARLET FEVER, 1921—CONCLUDED.

COUNTIES AND CITIES.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Totals.	Deaths.	Morbidity per 100,000.
Greeley	0	0	0	0	0	0	0	0	1	0	0	0	1	0	88.0
Greenwood	8	2	3	1	3	0	7	2	1	2	9	3	41	0	279.4
Hamilton	0	0	1	0	1	0	0	2	0	1	0	3	8	0	339.4
Harper	4	4	3	4	2	1	0	3	1	3	8	3	36	1	265.6
Harvey	8	5	3	3	2	1	0	1	2	8	19	7	59	1	286.9
Haskell	0	0	7	0	0	0	0	0	0	0	0	1	8	0	613.0
Hodgeman	12	5	5	1	1	2	1	0	0	0	2	0	29	0	772.9
Jackson	5	8	1	1	1	0	0	0	2	2	2	9	31	0	206.4
Jefferson	0	0	1	0	1	0	5	3	1	14	25	11	61	0	426.7
Jewell	2	2	3	1	2	0	0	9	15	33	43	29	139	4	885.6
Johnson	6	3	7	6	0	0	0	1	2	15	16	1	57	1	324.5
Kearny	1	1	1	2	0	0	0	0	1	0	1	0	7	0	276.5
Kingman	3	3	2	0	0	0	3	1	2	5	7	10	36	0	295.5
Kiowa	16	8	1	14	4	2	8	0	1	10	15	0	79	1	1,312.9
Labette, except	4	3	2	1	0	0	1	0	1	6	7	2	27	0	142.8
Parsons	6	2	0	2	1	2	0	1	0	5	8	10	37	2	230.8
Lane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Leavenworth, except	6	7	1	0	6	0	0	1	1	11	7	14	54	0	230.4
Leavenworth city	7	7	2	1	1	0	2	2	0	6	6	11	45	3	266.1
Lincoln	1	1	1	1	2	1	0	0	0	5	5	2	19	0	189.7
Linn	11	4	7	0	0	2	1	1	4	19	23	12	84	3	557.8
Logan	0	3	0	4	1	0	1	2	0	2	0	0	13	0	369.2
Lyon	14	4	5	6	8	5	1	0	5	9	11	4	72	0	274.0
Marion	20	11	3	10	7	6	0	4	3	6	23	13	106	1	436.0
Marshall	11	9	5	1	6	0	0	0	3	7	29	25	96	3	422.0
McPherson	14	8	1	2	0	2	0	0	1	8	7	3	46	3	215.0
Meade	22	7	0	0	3	0	0	1	0	0	0	4	37	0	684.0
Miami	1	0	2	0	1	0	1	0	2	13	16	7	43	4	238.5
Mitchell	5	7	0	4	2	0	1	1	6	4	12	7	49	1	361.4
Montgomery, except	14	3	5	0	7	1	0	3	12	18	15	3	81	2	205.3
Coffeyville	1	1	1	0	1	0	5	6	3	2	4	0	24	0	178.4
Morris	13	3	12	2	2	0	7	4	10	19	19	17	108	2	899.8
Morton	0	0	1	0	3	2	7	0	4	13	5	9	44	0	1,331.3
Nemaha	3	2	0	0	0	0	0	0	3	1	11	8	28	0	151.8
Neosho	7	2	1	1	0	0	0	6	8	27	11	9	72	0	299.2
Ness	3	7	4	2	2	0	0	0	2	5	4	5	34	1	477.3
Norton	0	0	4	1	0	0	0	2	0	4	7	11	29	4	258.3
Osage	0	1	4	2	2	2	4	2	4	6	2	3	32	0	158.6
Osborne	2	4	1	0	1	0	0	5	20	24	23	8	88	0	703.1
Ottawa	12	6	8	2	0	1	0	2	4	11	8	15	69	0	653.8
Pawnee	21	3	6	10	10	1	0	1	11	2	13	2	80	1	897.5

Phillips	7	6	4	9	1	3	6	8	9	27	31	16	127	3	1,039.1
Pottawatomie	5	10	4	1	1	0	7	4	6	12	2	3	55	1	355.0
Pratt	35	13	6	5	2	2	3	0	3	11	10	7	97	1	775.0
Rawlins	15	0	5	1	0	0	1	0	2	5	12	14	55	1	868.5
Reno, except	16	7	9	4	9	1	1	2	5	7	9	7	77	0	309.3
Hutchinson	15	15	15	14	4	2	2	3	3	12	16	8	109	1	467.9
Republic	9	2	3	1	1	3	1	2	0	2	5	10	39	1	252.1
Rice	22	8	5	5	2	1	0	7	1	6	9	17	83	2	566.7
Riley	5	3	17	0	6	0	5	1	3	8	3	8	59	2	346.7
Rooks	8	6	3	1	0	0	1	0	4	11	14	11	59	2	604.5
Rush	4	5	0	6	1	0	0	1	0	0	0	3	20	1	238.0
Russell	0	0	1	0	0	3	0	1	4	8	13	0	30	0	283.6
Saline, except	4	4	4	3	0	0	0	0	1	1	0	11	28	1	282.8
Salina	6	7	7	4	7	1	0	0	1	1	3	2	39	2	258.5
Scott	0	0	0	0	0	0	0	0	0	5	2	0	7	0	223.0
Sedgwick, except	15	0	8	1	3	3	1	0	0	29	7	13	80	1	317.0
Wichita	55	33	32	30	26	11	13	25	57	84	110	48	524	6	725.6
Seward	29	33	8	9	10	4	0	1	1	4	3	3	105	1	1,660.0
Shawnee, except	13	1	0	5	3	2	4	4	5	13	4	3	57	0	415.2
Topeka	37	10	27	22	6	12	6	22	26	25	20	12	225	2	449.8
Sheridan	29	9	6	1	2	1	0	0	4	1	9	3	65	3	1,180.0
Sherman	0	0	1	1	1	0	2	1	0	0	8	2	16	0	283.8
Smith	1	0	6	1	0	2	0	0	2	13	4	6	35	0	233.0
Stafford	15	2	3	3	2	0	1	0	1	5	5	15	52	0	455.1
Stanton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Stevens	0	0	0	0	0	0	0	0	0	0	0	3	3	0	78.9
Sumner	32	13	12	7	11	4	15	11	11	27	24	22	189	0	666.3
Thomas	0	0	0	0	0	0	0	0	0	0	1	1	2	1	37.3
Trego	0	0	0	0	0	0	0	0	1	2	4	3	10	0	163.8
Wabaunsee	3	0	1	3	7	0	0	1	2	9	3	6	35	0	316.6
Wallace	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Washington	13	0	0	0	5	1	2	1	9	8	8	18	65	3	374.7
Wichita	0	0	0	0	0	0	0	0	1	1	0	0	2	0	109.7
Wilson	3	4	1	0	0	0	0	2	7	14	11	5	47	1	219.2
Woodson	7	4	3	0	0	0	3	3	2	10	10	3	45	0	493.8
Wyandotte, except	3	0	0	0	0	0	0	0	2	15	3	1	24	2	119.5
Kansas City	17	11	18	2	6	8	4	5	7	26	23	12	139	2	137.4
Totals	905	515	461	344	305	132	171	256	424	1,066	1,114	842	6,535	110	367.73

SMALLPOX.

TABLE VII.—Cases reported from counties and first-class cities during 1920, by months, with deaths and case fatalities.

COUNTIES AND CITIES.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Totals.	Deaths.	Case fatality.
Allen	1	0	1	6	3	1	1	1	0	0	0	2	15	0	0.0
Anderson	1	4	0	0	0	1	0	1	0	1	0	0	8	0	0.0
Atchison, except	0	0	1	2	0	1	0	1	0	0	0	0	5	0	0.0
Atchison city	2	0	5	0	1	1	0	0	0	0	1	0	10	0	0.0
Barber	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0.0
Barton	3	0	0	1	2	1	2	1	1	4	4	4	23	0	0.0
Bourbon, except	0	2	0	3	3	11	13	2	0	1	1	0	36	0	0.0
Fort Scott	1	5	10	16	27	17	3	1	1	2	0	3	86	0	0.0
Brown	10	9	6	0	2	4	0	0	0	2	1	5	39	0	0.0
Butler	26	28	48	55	8	45	14	11	6	7	6	25	279	0	0.0
Chase	4	2	1	6	2	0	0	0	0	0	1	2	18	0	0.0
Chautauqua	6	0	0	5	0	0	1	0	0	0	0	0	12	0	0.0
Cherokee	1	1	6	1	5	1	3	0	0	0	0	0	18	0	0.0
Cheyenne	2	0	0	2	2	1	0	0	0	0	2	0	9	0	0.0
Clark	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Clay	0	14	0	0	1	0	0	0	0	0	0	3	18	0	0.0
Cloud	2	1	1	3	1	3	0	1	0	0	2	0	14	0	0.0
Coffey	1	0	1	0	0	0	0	1	0	0	0	0	3	0	0.0
Comanche	0	0	0	0	3	0	0	0	0	0	0	0	3	0	0.0
Cowley	3	1	4	2	14	5	7	0	0	0	0	0	36	0	0.0
Crawford, except	3	1	6	5	4	7	4	6	0	0	0	1	37	0	0.0
Pittsburg	2	7	14	42	17	21	9	4	1	2	3	5	127	0	0.0
Decatur	0	2	0	0	0	0	0	0	0	0	0	0	2	0	0.0
Dickinson	7	22	24	23	38	10	5	0	2	2	0	2	135	0	0.0
Doniphan	1	12	6	5	4	7	7	1	0	2	0	1	46	0	0.0
Douglas	9	2	1	2	9	3	1	0	0	0	1	0	28	0	0.0
Edwards	0	0	0	0	0	2	0	0	0	0	0	0	2	0	0.0
Elk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Ellis	0	0	2	4	1	1	1	0	1	0	0	7	17	0	0.0
Ellsworth	0	0	0	6	3	0	0	4	0	1	1	20	35	0	0.0
Finney	17	11	19	38	14	4	3	0	0	1	1	0	108	0	0.0
Ford	0	8	11	0	6	1	3	0	0	0	0	1	30	0	0.0
Franklin	0	0	4	3	10	0	3	0	1	16	3	1	41	0	0.0
Geary	1	0	0	0	0	0	0	0	0	1	0	0	2	0	0.0
Gove	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Graham	19	0	8	2	3	1	0	0	0	3	4	7	47	0	0.0
Grant	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0.0
Gray	5	1	3	2	2	0	0	0	0	0	0	0	13	0	0.0
Greeley	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Greenwood	0	2	10	17	3	1	0	0	0	0	0	1	34	0	0.0
Hamilton	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0.0

Harper	0	0	1	0	0	7	0	2	0	10	10	1	31	0	0.0
Harvey	0	1	7	7	17	28	7	0	1	1	0	3	72	0	0.0
Haskell	0	0	0	0	4	0	0	0	0	0	0	24	28	0	0.0
Hodgeman	0	15	0	7	6	0	0	0	0	0	0	1	29	0	0.0
Jackson	1	7	1	3	1	3	0	0	0	0	0	0	16	0	0.0
Jefferson	0	0	7	5	3	0	1	0	0	2	0	0	18	0	0.0
Jewell	45	33	13	18	28	7	1	0	2	1	1	0	149	0	0.0
Johnson	4	0	1	8	3	0	1	0	1	0	0	0	18	0	0.0
Kearny	0	0	0	2	0	0	0	0	0	0	0	0	2	0	0.0
Kingman	2	0	1	10	0	2	11	3	0	0	0	0	29	0	0.0
Kiowa	0	4	1	0	0	1	0	0	0	0	0	0	6	0	0.0
Labette, except	0	6	6	0	0	0	0	0	0	0	0	0	12	0	0.0
Parsons	1	7	9	12	12	8	18	4	0	1	1	3	76	0	0.0
Lane	0	0	0	3	12	3	0	0	0	0	0	0	18	0	0.0
Leavenworth, except	8	4	0	0	0	0	2	0	0	0	2	0	16	0	0.0
Leavenworth city	6	1	0	0	1	0	1	0	0	1	0	2	12	0	0.0
Lincoln	1	2	0	0	0	0	0	0	0	0	0	0	3	0	0.0
Linn	1	0	0	2	2	3	6	5	0	10	2	1	32	0	0.0
Logan	0	0	0	0	0	2	0	0	0	1	2	0	5	0	0.0
Lyon	0	0	0	4	12	3	0	0	0	1	0	0	20	0	0.0
Marion	0	2	3	1	0	6	2	1	0	1	3	5	24	0	0.0
Marshall	10	1	1	2	5	13	2	1	2	9	29	43	118	0	0.0
McPherson	0	0	7	9	4	5	4	0	0	7	2	0	38	0	0.0
Meade	0	0	0	0	1	1	0	1	0	0	1	0	4	0	0.0
Miami	0	2	0	0	3	0	1	6	0	0	0	0	12	0	0.0
Mitchell	0	1	0	2	0	6	0	0	0	14	12	5	40	0	0.0
Montgomery, except	3	0	2	11	21	18	7	4	0	0	0	1	67	0	0.0
Coffeyville	1	1	2	1	1	1	1	1	1	0	0	0	10	0	0.0
Morris	0	0	0	0	0	0	1	0	1	0	0	3	5	0	0.0
Morton	1	4	3	1	6	3	0	2	0	1	0	0	21	0	0.0
Nemaha	3	0	2	0	1	0	0	0	0	0	0	1	7	0	0.0
Neosho	3	13	4	7	0	1	1	0	1	0	0	0	30	1	3.3
Ness	0	0	0	0	0	1	1	2	2	0	0	2	8	0	0.0
Norton	39	3	5	2	1	1	0	0	0	0	0	0	51	2	3.9
Osage	6	6	8	5	2	6	3	3	10	11	2	0	62	0	0.0
Osborne	0	0	0	0	0	0	1	0	0	0	0	3	4	0	0.0
Ottawa	4	0	0	0	0	1	0	1	0	0	0	1	7	0	0.0
Pawnee	0	2	2	1	12	5	2	0	0	11	7	0	42	0	0.0
Phillips	47	45	27	4	15	0	0	0	1	3	1	0	143	0	0.0
Pottawatomie	2	0	7	0	1	0	1	1	1	0	0	0	13	0	0.0
Pratt	4	0	17	7	0	0	2	0	0	0	0	1	31	0	0.0
Rawlins	9	1	1	6	0	0	0	0	1	0	0	0	18	0	0.0
Reno, except	0	0	3	0	0	0	0	0	0	1	0	5	9	0	0.0
Hutchinson	0	3	1	0	1	2	0	1	0	0	0	4	12	0	0.0
Republic	0	0	4	6	14	7	3	1	0	0	0	3	38	0	0.0
Rice	0	0	0	4	1	1	1	1	7	1	0	4	20	0	0.0
Riley	2	1	6	1	1	0	0	0	0	0	8	20	39	0	0.0
Rooks	7	3	3	0	0	0	0	5	0	0	0	0	18	0	0.0
Rush	1	0	0	0	8	0	0	0	0	0	0	0	10	0	0.0

TABLE VII.—SMALLPOX, 1920—CONCLUDED.

COUNTIES AND CITIES.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Totals.	Deaths.	Case fatality.
Russell	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Saline	0	6	6	20	1	1	1	3	0	1	3	1	43	0	0.0
Scott	1	5	21	5	2	1	1	0	0	0	0	5	11	0	0.0
Sedgwick, except	0	5	10	10	7	0	1	0	1	1	0	0	35	0	0.0
Wichita	20	47	58	79	54	60	21	21	9	10	0	3	382	0	0.0
Seward	2	0	0	0	0	1	2	0	0	0	0	0	5	0	0.0
Shawnee, except	1	0	1	0	1	2	14	8	1	0	0	0	28	0	0.0
Topeka	5	6	19	20	23	14	2	1	3	0	0	0	93	0	0.0
Sheridan	4	0	0	0	0	0	0	0	0	0	0	0	4	0	0.0
Sherman	5	3	1	2	17	9	0	2	1	2	5	11	58	0	0.0
Smith	19	7	18	19	19	0	4	5	0	0	0	0	91	0	0.0
Stafford	0	1	1	0	0	3	1	0	0	3	2	1	12	0	0.0
Stanton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Stevens	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0.0
Sumner	3	2	1	6	16	13	8	0	0	0	0	1	50	0	0.0
Thomas	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0.0
Trego	13	1	1	5	0	0	0	0	0	0	0	0	20	0	0.0
Wabaunsee	0	0	0	1	2	0	0	0	0	0	0	0	3	0	0.0
Wallace	0	0	0	0	0	0	0	0	0	0	0	9	9	0	0.0
Washington	1	0	0	0	2	0	7	0	2	0	0	0	12	0	0.0
Wichita	0	0	0	3	2	1	0	0	0	0	0	0	6	0	0.0
Wilson	4	0	0	5	8	3	0	0	11	6	11	18	66	0	0.0
Woodson	0	1	4	4	0	0	0	0	0	0	0	0	9	0	0.0
Wyandotte, except	1	1	2	0	2	1	0	0	0	0	0	0	7	0	0.0
Kansas City	0	9	18	14	15	7	4	0	3	1	8	13	92	0	0.0
Totals	419	398	508	595	559	413	226	120	75	156	143	288	3,900	3	0.0

SMALLPOX.

TABLE VIII.—Cases reported from counties and first-class cities during 1921, by months, with deaths and morbidity rates.

COUNTIES AND CITIES.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.	Deaths.	Morbidity per 100,000.
Allen	6	0	0	0	0	1	1	0	0	0	6	24	38	6	149.0
Anderson	0	0	2	0	1	0	0	0	0	1	2	2	8	2	63.3
Atchison, except	0	0	0	0	0	4	0	0	0	0	0	0	4	0	30.9
Atchison city	0	1	0	3	1	1	0	1	0	0	0	0	7	0	55.4
Barber	0	0	0	0	0	0	1	0	0	0	0	0	1	0	10.6
Barton	4	5	15	12	23	29	2	2	4	13	7	1	117	0	635.8
Bourbon, except	15	13	20	18	5	0	4	1	0	0	0	0	76	0	525.0
Fort Scott	3	25	32	25	33	11	0	1	0	0	0	0	130	0	1,215.7
Brown	9	13	2	1	3	0	0	0	0	0	0	3	31	0	149.5
Butler	29	18	13	22	26	13	2	3	0	0	5	3	134	1	316.9
Chase	0	0	2	0	0	0	0	0	0	0	0	0	2	0	32.0
Chautauqua	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Cherokee	2	1	3	4	0	1	0	0	0	0	2	4	17	1	48.4
Cheyenne	0	2	18	6	8	0	1	0	0	0	0	3	38	0	837.5
Clark	0	3	0	0	0	1	0	0	0	0	0	0	4	0	79.7
Clay	0	0	9	7	18	0	0	0	0	1	0	1	36	0	229.3
Cloud	53	116	37	8	7	0	0	0	0	0	1	3	225	0	1,287.3
Coffey	0	0	4	0	7	5	3	0	0	0	0	0	19	0	126.5
Comanche	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Cowley	2	1	2	0	2	0	1	0	0	0	1	0	9	0	24.7
Crawford, except	5	2	5	10	24	2	2	0	0	0	2	1	53	0	123.0
Pittsburg	3	1	4	3	9	2	0	0	0	0	0	3	25	0	138.5
Decatur	7	65	13	24	77	21	5	0	0	0	0	0	212	0	2,645.0
Dickinson	13	11	23	4	3	0	0	0	0	0	0	0	54	1	204.6
Doniphan	2	1	14	13	4	0	0	0	0	0	0	0	34	0	223.0
Douglas, except	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Lawrence	2	1	1	4	1	0	0	0	0	0	0	2	11	0	88.3
Edwards	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Elk	0	0	0	0	0	0	0	0	0	0	0	4	4	0	38.6
Ellis	0	0	2	0	0	0	0	0	0	0	0	0	2	0	13.2
Ellsworth	45	12	17	7	14	3	2	0	0	0	0	6	106	0	105.2
Finney	2	3	2	6	10	0	0	0	0	0	0	0	23	0	297.5
Ford	8	2	1	1	0	0	0	1	0	0	2	3	18	0	121.3
Franklin	14	1	15	12	7	1	0	0	0	0	0	0	50	0	217.6
Geary	1	5	6	0	1	0	0	1	0	0	0	0	14	0	114.8
Gove	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Graham	12	28	5	0	0	0	0	0	0	0	0	0	45	0	601.0
Grant	1	0	0	0	1	0	0	0	0	0	0	0	2	0	175.1
Gray	40	6	0	0	0	0	3	0	0	0	0	5	54	0	1,270.0

TABLE VIII.—SMALLPOX, 1921—CONCLUDED.

COUNTIES AND CITIES.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Totals.	Deaths.	Morbidity per 100,000.
Greeley	0	3	1	0	0	11	0	0	0	0	0	0	15	0	1,320.4
Greenwood	0	4	1	24	40	0	0	0	0	0	5	1	75	3	511.1
Hamilton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Harper	1	0	2	5	2	1	0	0	0	0	0	0	11	0	81.2
Harvey	6	5	4	11	3	0	0	0	0	0	0	0	29	0	141.0
Haskell	12	2	0	1	0	0	0	0	0	0	0	0	15	0	1,226.1
Hodgeman	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Jackson	0	0	0	0	3	0	0	0	0	1	1	0	5	0	33.3
Jefferson	0	0	3	1	3	8	7	0	0	5	0	0	27	0	188.9
Jewell	0	1	8	13	8	1	2	0	0	0	2	1	36	0	229.4
Johnson	0	0	0	0	0	0	0	0	0	0	3	0	3	0	17.1
Kearny	0	0	0	2	2	0	0	0	0	0	0	0	2	0	79.0
Kingman	0	0	1	0	4	0	0	0	0	0	0	1	6	0	49.3
Kiowa	0	0	0	0	1	0	0	0	0	0	0	0	1	0	16.6
Labette, except	6	0	3	6	26	8	0	3	0	1	2	5	60	1	317.3
Parsons	13	14	5	19	19	9	1	1	0	0	0	0	81	0	505.4
Lane	0	0	0	1	0	0	0	0	0	0	0	0	1	0	38.7
Leavenworth, except	4	4	2	1	0	1	1	0	0	0	0	5	18	0	76.8
Leavenworth city	1	0	0	2	2	0	0	0	0	0	1	0	6	0	35.5
Lincoln	1	0	1	8	33	2	5	0	0	0	1	3	54	0	539.2
Linn	13	7	1	1	0	2	0	2	3	0	4	0	33	2	219.1
Logan	0	0	0	1	2	2	0	0	0	0	0	0	5	0	142.3
Lyon	0	1	0	2	0	0	0	0	0	3	0	0	6	0	22.8
Marion	3	15	5	13	11	3	0	0	0	0	0	1	51	1	210.0
Marshall	60	36	19	27	5	0	0	0	0	0	2	6	155	3	682.0
McPherson	3	4	15	0	3	1	0	0	0	0	1	0	27	0	126.4
Meade	0	5	0	8	0	0	1	0	0	0	0	0	14	0	259.0
Miami	7	9	15	4	8	2	0	1	0	0	0	0	46	0	255.1
Mitchell	3	1	10	13	8	0	0	0	0	0	1	1	37	0	272.9
Montgomery, except	2	0	8	7	11	8	1	0	0	4	0	4	45	1	114.1
Coffeyville	1	0	3	1	4	1	0	0	0	0	0	0	10	0	74.3
Morris	0	1	5	3	1	0	0	3	0	0	0	0	13	0	108.3
Morton	2	0	0	0	0	0	0	0	0	0	0	1	3	0	90.8
Nemaha	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Neosho	0	1	2	2	0	0	0	0	0	0	2	2	9	2	37.4
Ness	1	0	6	6	0	0	2	0	0	0	0	0	15	0	210.6
Norton	5	4	1	0	3	0	1	3	1	0	0	0	18	0	160.3
Osage	7	0	2	5	1	0	0	0	0	0	0	0	15	0	74.3
Osborne	37	1	0	1	1	1	0	0	0	0	1	7	49	0	391.5
Ottawa	16	6	5	1	0	1	0	0	0	0	0	0	29	1	274.8
Pawnee	6	0	0	5	10	1	0	0	0	0	0	0	22	0	246.8

Phillips	4	4	8	15	4	8	2	0	0	0	0	0	45	0	368.2
Pottawatomie	0	0	0	1	1	0	0	0	0	0	0	0	2	0	12.9
Pratt	4	1	2	2	4	1	0	0	0	0	0	1	15	0	119.8
Rawlins	0	0	0	6	7	0	1	0	0	0	0	0	14	0	221.1
Reno, except	14	6	20	26	9	9	0	1	0	1	5	6	97	0	389.6
Hutchinson	9	12	31	64	45	16	3	3	3	9	27	74	296	0	1,270.5
Republic	14	23	12	3	7	0	0	0	0	0	0	1	60	0	387.8
Rice	16	19	40	16	5	1	3	0	0	0	0	0	100	0	682.7
Riley	6	6	3	0	0	1	0	0	0	0	0	0	16	0	94.0
Rooks	8	18	10	5	8	1	1	1	0	0	2	5	59	0	604.5
Rush	17	0	0	0	0	0	9	0	6	0	0	4	36	1	428.6
Russell	10	13	2	12	6	3	2	0	1	0	0	0	49	1	463.2
Saline, except	0	1	29	4	2	0	0	0	0	0	2	1	39	0	393.9
Salina	6	5	28	11	6	1	0	0	0	0	0	1	58	0	384.5
Scott	2	2	5	3	0	0	0	0	0	0	0	0	12	0	384.1
Sedgwick, except	2	0	0	0	0	0	0	0	0	0	0	0	2	0	7.9
Wichita	18	22	41	38	37	24	5	5	0	0	3	4	197	0	272.8
Seward	2	5	3	1	0	0	0	0	0	0	0	0	11	0	173.9
Shawnee, except	0	1	6	1	2	4	2	0	0	0	0	0	16	0	116.2
Topeka	2	5	17	35	58	11	3	1	0	1	3	4	140	0	280.0
Sheridan	4	9	4	1	3	1	0	1	0	0	0	0	23	0	417.4
Sherman	20	22	21	4	1	0	2	0	0	0	0	0	70	0	1,241.6
Smith	11	0	1	2	0	0	0	0	0	0	6	1	21	0	139.8
Stafford	7	3	2	23	5	1	0	0	0	0	0	1	42	0	367.6
Stanton	0	0	0	3	3	0	0	0	0	0	0	0	6	0	585.4
Stevens	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Sumner	1	0	1	3	1	4	2	0	0	2	1	0	15	0	52.9
Thomas	0	0	0	0	8	0	0	0	0	0	0	0	8	0	148.6
Trego	0	2	0	0	0	0	1	0	0	0	0	0	3	0	49.1
Wabaunsee	0	1	0	0	2	1	0	0	1	6	71	12	94	0	850.3
Wallace	52	5	0	0	7	1	0	0	0	0	0	0	65	0	3,030.0
Washington	3	2	0	0	2	0	0	0	0	0	0	1	8	0	46.1
Wichita	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Wilson	22	3	30	14	2	0	0	0	0	1	2	2	76	0	354.5
Woodson	0	7	4	1	0	0	0	0	0	0	0	0	12	0	131.7
Wyandotte, except	2	1	0	1	2	1	1	0	0	0	0	1	9	0	44.8
Kansas City	13	9	41	65	52	16	3	3	4	7	37	14	264	18	260.9
Totals	757	667	756	744	786	263	88	38	23	56	213	239	4,630	45	260.53

TYPHOID FEVER.

TABLE IX.—Cases reported from counties and first-class cities during 1920, by months, with deaths and case fatalities.

Counties and Cities.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Totals.	Deaths.	Case fatality.
Allen	0	0	0	0	0	0	1	0	2	2	0	0	5	2	40.0
Anderson	0	0	0	0	0	0	0	1	0	0	0	0	1	3	0.0
Atchison, except	0	0	0	0	0	0	0	0	1	1	0	0	2	0	0
Atchison city	0	0	0	0	0	0	1	2	1	0	0	0	4	1	25.0
Barber	0	0	0	0	0	0	0	2	1	0	1	0	4	0	0.0
Barton	0	0	0	1	1	0	1	3	3	3	0	0	12	7	58.3
Bourbon, except	1	0	0	0	1	1	0	2	1	4	0	0	10	1	10.0
Fort Scott	0	0	0	0	0	0	4	1	1	0	0	1	7	2	28.6
Brown	0	0	0	2	0	1	0	1	3	1	1	0	9	0	0.0
Butler	6	0	0	3	20	4	7	14	16	14	18	5	107	7	6.5
Chase	0	0	0	0	1	1	0	2	4	2	4	0	14	1	7.1
Chautauqua	0	0	0	0	3	2	5	4	5	3	1	0	23	2	8.7
Cherokee	3	1	0	0	2	4	6	24	20	6	1	1	68	9	13.2
Cheyenne	1	0	0	0	0	0	0	0	0	1	0	0	2	0	0.0
Clark	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Clay	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0.0
Cloud	6	0	0	0	1	1	0	0	0	1	0	0	9	2	22.2
Coffey	0	0	1	0	0	0	2	1	2	9	1	1	17	4	23.5
Comanche	0	2	2	0	0	0	3	1	0	0	0	0	8	0	0.0
Cowley	0	0	0	1	0	3	4	1	6	0	0	2	17	1	5.9
Crawford, except	1	1	0	0	1	8	5	3	3	5	0	0	27	9	33.3
Pittsburg	0	0	0	0	0	2	2	0	3	3	1	0	11	1	9.1
Decatur	2	0	0	0	0	1	0	0	3	1	2	0	9	0	0.0
Dickinson	1	0	0	0	0	1	6	0	3	2	2	0	15	2	13.3
Doniphan	0	0	0	0	0	0	0	0	2	1	0	0	3	0	0.0
Douglas	0	0	0	0	0	0	0	3	0	2	0	1	6	0	0.0
Edwards	0	0	0	0	0	0	0	0	0	2	0	0	2	1	50.0
Elk	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0.0
Ellis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Ellsworth	0	0	0	0	4	1	2	0	1	0	0	0	8	0	0.0
Finney	0	0	0	0	0	1	0	1	3	9	0	0	14	2	14.3
Ford	0	0	0	1	0	2	2	2	6	4	2	0	19	1	5.3
Franklin	0	0	0	0	1	2	3	1	1	5	2	0	15	1	6.7
Geary	1	0	0	0	0	0	1	0	2	1	0	0	5	0	0.0
Gray	0	0	0	0	0	0	2	2	3	0	0	0	7	1	14.3
Greeley	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Greenwood	0	0	0	0	0	0	0	1	0	2	1	0	4	0	0.0
Hamilton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Harper	0	0	1	7	0	0	0	3	5	2	1	0	19	0	0.0
Harvey	0	0	0	0	0	0	0	1	0	0	0	0	1	1	100.0
Haskell	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0

Hodgeman	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0.0
Jackson	1	0	0	0	0	0	0	1	3	0	0	0	5	1	20.0
Jefferson	0	0	0	0	0	0	0	3	0	2	1	2	8	0	0.0
Jewell	0	0	0	0	0	0	2	20	2	0	0	0	24	0	0.0
Johnson	0	0	0	0	0	2	2	0	1	0	0	0	5	0	0.0
Kearny	0	0	0	0	0	0	1	1	0	1	0	0	3	0	0.0
Kingman	0	0	0	0	0	0	0	3	3	0	1	1	8	2	25.0
Kiowa	0	0	0	0	0	0	0	6	1	0	0	0	7	0	0.0
Labette, except	0	0	0	0	0	0	0	4	1	2	0	0	7	0	0.0
Parsons	0	0	0	0	0	2	0	1	3	0	1	0	7	4	57.2
Lane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Leavenworth, except	0	0	0	0	1	0	0	0	1	0	0	0	2	1	50.0
Leavenworth city	0	0	0	0	0	1	0	0	0	1	0	0	2	0	0.0
Lincoln	0	0	0	0	1	0	2	0	0	0	1	0	4	0	0.0
Linn	0	0	0	2	3	0	0	1	20	1	2	0	29	3	10.3
Logan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Lyon	0	1	0	0	0	0	6	11	15	6	1	0	40	1	2.5
Marion	2	1	0	0	0	0	3	3	2	2	0	0	13	0	0.0
Marshall	0	0	0	0	0	0	1	0	1	1	1	0	4	1	25.0
McPherson	0	0	0	0	0	0	0	1	1	6	5	0	13	0	0.0
Meade	0	0	0	0	0	0	1	2	1	0	0	0	4	1	25.0
Miami	3	0	1	1	0	1	0	1	7	2	1	0	17	2	11.8
Mitchell	0	0	0	0	0	0	0	1	0	0	0	0	1	1	100.0
Montgomery, except	3	1	0	1	3	5	3	9	2	1	1	1	30	5	16.7
Coffeyville	4	0	0	3	2	1	2	4	4	0	0	1	21	1	4.8
Morris	1	0	0	1	0	0	0	5	4	3	0	0	14	1	7.1
Morton	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0
Nemaha	1	0	1	0	0	0	0	2	2	2	1	0	9	4	44.4
Neosho	0	0	0	0	0	1	3	2	1	2	2	2	13	3	23.1
Ness	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0.0
Norton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Osage	1	0	0	1	0	0	0	0	2	1	2	0	7	1	14.3
Osborne	0	0	0	0	0	0	0	0	1	0	0	0	1	1	100.0
Ottawa	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0.0
Pawnee	0	0	0	0	2	0	1	1	0	0	1	0	5	1	20.0
Phillips	0	0	0	1	0	0	0	0	0	0	0	0	1	1	100.0
Pottawatomie	0	0	0	0	0	0	0	8	1	1	0	0	10	0	0.0
Pratt	1	0	0	0	1	1	0	0	2	0	1	1	7	0	0.0
Rawlins	0	0	0	0	0	0	0	1	0	0	0	0	1	1	100.0
Reno, except	0	0	0	1	1	0	2	4	0	2	3	1	14	1	7.1
Hutchinson	0	0	0	0	1	3	6	7	6	10	0	0	23	4	17.4
Republic	1	0	0	0	0	0	0	1	1	3	0	0	6	0	0.0
Rice	1	0	0	0	0	0	1	1	0	0	0	0	3	0	0.0
Riley	0	0	0	1	0	0	1	1	1	1	2	0	7	1	14.3
Rooks	0	0	0	0	0	0	0	0	1	0	1	0	2	0	0.0
Rush	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0
Russell	0	0	0	0	0	1	0	0	0	0	1	0	2	0	0.0
Saline	0	0	0	0	1	5	0	3	2	2	0	1	14	4	28.6
Scott	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0

TABLE IX.—TYPHOID FEVER, 1920—CONCLUDED.

COUNTIES AND CITIES.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Totals.	Deaths.	Case fatality.
Sedgwick, except	0	0	0	0	0	0	0	6	3	1	2	0	12	1	8.3
Wichita	1	1	0	1	1	1	19	6	9	5	0	2	46	7	15.2
Seward	0	0	0	0	0	0	2	1	0	0	0	0	3	1	33.3
Shawnee, except	0	0	0	0	0	0	1	0	2	0	0	1	4	1	25.0
Topeka	1	0	1	2	0	7	0	13	17	5	1	1	48	6	12.5
Sheridan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Sherman	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Smith	1	0	0	0	1	0	1	0	1	0	0	1	5	1	20.0
Stafford	0	0	0	0	0	0	0	0	14	2	0	0	16	1	6.2
Stanton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Stevens	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Sumner	6	0	0	1	5	2	3	7	13	2	2	1	42	2	4.8
Thomas	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Trego	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Wabaunsee	0	0	0	0	0	0	0	1	0	1	1	0	3	0	0.0
Wallace	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Washington	0	0	0	0	0	0	1	1	0	1	0	0	3	0	0.0
Wichita	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Wilson	0	0	0	0	0	4	1	10	2	4	1	0	22	2	9.1
Woodson	0	0	0	0	0	0	1	0	0	0	0	0	1	1	100.0
Wyandotte, except	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Kansas City	13	1	1	1	0	2	11	7	8	4	2	6	56	6	10.7
Totals	63	9	8	32	58	75	134	237	262	167	76	33	1,154	138	12.0

TYPHOID FEVER.

TABLE X.—Cases reported from counties and first-class cities during 1921, by months, with deaths and morbidity rates.

COUNTIES AND CITIES.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.	Deaths.	Morbidity per 100,000.
Allen	0	0	0	0	0	2	4	1	1	1	0	0	9	7	35.3
Anderson	0	0	0	0	0	1	1	2	1	0	0	0	5	0	39.5
Atchison, except	0	0	0	0	0	0	3	0	0	0	0	0	3	2	23.1
Atchison city	0	0	0	0	0	6	3	0	0	2	0	0	11	0	87.1
Barber	0	0	0	0	0	0	1	1	2	1	1	0	6	1	63.9
Barton	1	0	0	1	0	0	1	1	1	0	0	0	5	2	27.2
Bourbon, except	1	0	0	0	0	0	2	0	1	2	0	0	6	0	41.4
Fort Scott	0	0	0	0	0	2	0	1	1	4	0	1	9	2	84.2
Brown	2	2	0	0	0	0	0	1	1	5	0	0	11	1	53.1
Butler	5	1	0	0	3	0	20	14	3	6	4	1	57	6	134.8
Chase	0	0	0	0	0	0	0	0	0	2	0	0	2	1	32.0
Chautauqua	1	0	0	0	0	0	0	0	0	0	0	0	1	2	8.6
Cherokee	0	0	0	1	1	2	6	1	1	1	0	1	14	2	39.8
Cheyenne	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Clark	0	0	0	0	0	1	1	0	0	0	0	0	2	0	39.8
Clay	0	0	2	0	0	1	0	0	0	0	0	1	4	0	25.5
Cloud	1	0	0	0	1	0	1	0	0	1	0	0	4	1	22.9
Coffey	0	0	0	0	0	0	1	0	6	0	1	1	9	4	59.9
Comanche	0	0	0	0	0	3	0	0	1	0	0	0	4	0	77.9
Cowley	1	0	0	0	1	3	6	4	3	3	0	0	21	1	57.6
Crawford, except	0	0	0	0	0	1	3	4	3	2	2	1	16	10	37.1
Pittsburg	0	0	0	1	0	0	3	2	4	1	2	0	13	2	72.0
Decatur	0	0	0	0	0	0	0	1	0	0	2	0	3	0	37.4
Dickinson	1	0	0	0	0	0	1	4	1	0	0	0	7	1	26.5
Doniphan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Douglas, except	0	1	0	0	0	0	0	1	0	2	0	0	4	1	31.6
Lawrence	0	0	0	0	1	1	1	0	2	5	0	0	10	2	80.1
Edwards	0	0	0	1	0	0	0	0	1	3	0	0	5	0	74.3
Elk	0	0	0	0	0	0	0	0	1	0	0	0	1	1	9.6
Ellis	0	0	0	0	0	0	0	0	0	0	1	0	1	1	6.6
Ellsworth	1	0	0	0	0	2	1	0	1	1	0	0	6	0	59.6
Finney	1	0	0	0	0	0	1	0	4	4	0	0	10	3	129.4
Ford	1	0	0	0	0	2	5	0	2	0	0	1	11	3	74.1
Franklin	0	0	0	0	0	0	0	2	2	1	0	0	5	0	21.8
Geary	0	1	2	0	1	0	0	0	1	0	0	0	5	0	41.0
Gove	0	0	0	0	0	0	0	0	0	0	1	0	1	1	20.0
Graham	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Grant	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0
Gray	0	0	0	0	0	0	0	0	2	1	0	0	3	0	70.5

TABLE X.—TYPHOID FEVER, 1921—CONCLUDED.

COUNTIES AND CITIES.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Totals.	Deaths.	Morbidity per 100,000.
Greeley	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Greenwood	1	1	0	2	1	0	2	3	2	0	1	0	13	0	88.6
Hamilton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Harper	0	0	0	0	1	0	2	3	1	0	2	0	9	3	66.4
Harvey	0	0	0	0	0	0	3	5	1	0	0	0	9	2	43.8
Haskell	0	0	0	0	0	0	0	1	0	0	0	0	1	2	76.6
Hodgeman	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Jackson	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Jefferson	0	0	0	0	0	0	0	0	0	1	0	0	1	0	7.0
Jewell	0	0	0	0	1	0	1	0	1	1	0	0	4	0	25.5
Johnson	0	0	0	0	0	0	0	3	6	0	0	1	10	2	56.9
Kearny	0	0	0	0	0	0	0	0	1	0	0	0	1	0	39.5
Kingman	0	0	1	0	0	0	0	0	0	2	0	0	3	1	24.6
Kiowa	1	0	0	0	0	0	1	1	0	0	0	0	3	0	49.9
Labette, except	1	0	0	0	0	1	9	2	3	3	0	0	19	5	100.5
Parsons	0	0	0	0	4	1	2	0	1	2	0	0	10	0	62.4
Lane	0	0	0	0	0	0	1	0	0	0	0	0	1	0	38.7
Leavenworth, except	0	0	2	0	0	2	0	2	2	1	3	0	12	1	51.2
Leavenworth city	1	0	0	0	0	0	0	0	1	1	0	1	4	0	23.7
Lincoln	0	0	0	0	0	0	3	2	1	0	0	0	6	0	59.9
Linn	0	0	0	0	0	0	0	1	2	0	0	1	4	1	26.6
Logan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Lyon	0	0	0	0	0	1	5	5	1	1	0	1	14	1	53.2
Marion	0	0	0	0	0	3	2	0	5	4	0	0	14	2	57.3
Marshall	0	0	0	0	0	0	0	0	0	0	1	0	1	0	4.4
McPherson	2	0	0	0	1	0	1	0	0	0	0	0	4	0	18.7
Meade	0	0	0	0	0	0	1	3	1	0	0	0	5	1	92.4
Miami	0	0	0	1	0	8	5	0	5	4	0	0	23	3	127.5
Mitchell	0	0	0	0	0	0	1	1	1	0	0	0	3	1	22.1
Montgomery, except	0	1	1	2	2	4	6	6	5	2	0	1	30	4	76.0
Coffeyville	1	0	0	2	0	1	4	2	7	0	1	1	19	5	141.2
Morris	0	0	0	0	0	0	1	1	0	0	0	0	2	0	16.7
Morton	0	0	0	0	0	0	0	2	0	4	0	0	6	0	181.5
Nemaha	0	0	0	0	0	0	0	1	0	1	0	1	3	0	16.3
Neosho	2	0	0	1	6	2	4	3	2	1	0	0	21	3	86.3
Ness	0	0	0	0	0	0	2	1	2	2	0	0	7	2	98.3
Norton	0	0	0	0	0	0	1	0	0	8	5	2	16	3	142.5
Osage	0	0	0	0	0	1	0	2	3	0	1	6	13	1	64.4
Osborne	0	0	0	0	0	0	1	0	0	0	0	0	1	0	8.1
Ottawa	0	0	0	1	0	0	0	0	1	0	0	0	2	0	19.0
Pawnee	0	0	0	0	0	1	0	2	0	1	0	0	4	2	44.9

Phillips	0	0	0	0	0	0	0	1	1	0	0	0	2	0	16.4
Pottawatomie	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0
Pratt	0	0	0	0	0	0	0	5	1	0	1	0	7	0	55.9
Rawlins	0	0	0	0	1	0	0	4	1	1	0	0	7	0	110.5
Reno, except	0	0	0	0	0	0	3	2	0	3	0	0	8	2	32.1
Hutchinson	0	0	0	0	1	1	3	4	2	1	0	0	12	1	51.5
Republic	0	0	0	0	0	1	1	1	3	1	2	0	9	2	58.2
Rice	0	0	0	0	0	0	0	2	0	0	0	0	2	2	13.7
Riley	0	0	0	0	1	0	4	2	0	0	2	0	9	1	52.9
Rooks	0	0	0	0	0	0	0	0	1	0	0	0	1	1	10.2
Rush	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0
Russell	0	0	0	0	0	0	0	2	1	0	0	0	3	1	28.4
Saline, except	0	0	0	0	0	0	0	1	1	0	0	0	2	0	20.2
Salina	0	0	0	0	0	1	3	0	1	0	0	0	5	1	33.1
Scott	0	0	0	0	0	0	1	0	0	0	0	0	1	0	32.0
Sedgwick, except	1	0	0	0	0	1	2	2	1	0	0	0	7	0	27.7
Wichita	2	1	1	0	0	2	25	119	13	3	1	3	170	16	235.4
Seward	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Shawnee, except	0	0	0	0	0	0	3	3	3	0	0	0	9	0	65.6
Topeka	2	1	3	1	1	2	1	6	3	0	2	0	22	5	44.0
Sheridan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Sherman	0	0	0	0	0	0	0	0	1	0	0	0	1	0	17.7
Smith	0	0	0	0	0	0	2	0	0	2	0	1	5	2	33.3
Stafford	0	1	1	0	0	0	0	1	0	1	0	0	4	3	35.0
Stanton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Stevens	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Sumner	0	2	0	0	0	3	8	11	3	0	0	0	27	1	95.2
Thomas	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Trego	0	0	0	0	0	0	0	0	1	0	0	0	1	0	16.4
Wabaunsee	1	0	0	0	1	0	0	0	0	0	0	0	2	1	18.1
Wallace	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Washington	0	0	0	0	0	0	0	1	0	0	0	0	1	0	5.8
Wichita	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Wilson	1	1	0	0	1	0	1	2	1	0	0	0	7	3	32.7
Woodson	0	0	0	0	0	1	2	0	0	1	0	0	4	2	43.9
Wyandotte, except	0	0	0	0	0	0	1	1	3	0	0	0	5	0	24.9
Kansas City	1	1	0	0	3	5	5	5	8	11	3	1	43	6	42.5
Totals	33	14	13	14	33	69	188	267	150	111	39	27	958	155	53.90

INFLUENZA.

TABLE XI.—Cases reported from counties and first class cities during 1920, arranged by ages.

COUNTIES AND CITIES.	Under 1 year.	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 59	60 and over.	Not stated.	Total.
Allen	12	81	106	136	106	68	67	73	98	55	27	45	16	173	1,063
Anderson	0	14	16	17	12	10	9	14	9	14	9	6	6	156	292
Atchison, except	2	31	37	32	26	32	23	21	17	16	0	9	9	321	585
Atchison city	0	9	14	8	10	11	15	13	12	10	5	10	8	680	805
Barber	1	22	47	49	45	22	37	34	32	17	10	13	7	72	408
Barton	2	36	52	33	32	30	47	40	26	19	10	9	12	4	352
Bourbon, except	2	20	44	53	40	37	27	24	26	21	21	18	8	2	343
Fort Scott	1	16	20	16	17	12	22	16	21	5	9	17	15	42	229
Brown	5	90	104	110	93	60	93	87	75	48	24	39	35	135	998
Butler	19	119	180	167	135	128	178	176	132	65	46	53	40	164	1,602
Chase	5	35	68	50	42	31	51	60	38	31	20	20	14	111	576
Chautauqua	0	24	25	18	19	18	21	26	15	14	11	10	6	65	272
Cherokee	7	134	209	168	123	126	147	135	119	95	48	67	54	508	1,940
Cheyenne	1	8	15	9	12	3	5	13	10	8	4	2	1	8	99
Clark	7	50	78	57	46	28	38	42	37	17	15	13	9	268	705
Clay	4	62	116	109	57	57	57	61	60	32	23	16	19	46	719
Cloud	4	44	73	58	37	46	43	63	33	25	7	21	10	126	590
Coffey	9	41	61	45	32	31	54	50	36	24	7	16	13	372	791
Comanche	0	11	18	18	13	8	4	14	10	4	2	2	1	9	114
Cowley	6	139	217	224	228	224	154	155	137	85	60	64	52	237	1,982
Crawford, except	5	123	247	243	162	119	181	183	170	109	61	65	41	302	2,011
Pittsburg	5	41	33	46	33	20	45	30	26	20	8	24	10	142	483
Decatur	4	32	46	35	44	52	42	44	46	27	22	28	15	163	600
Dickinson	9	91	96	73	67	76	79	82	66	46	26	27	24	220	982
Doniphan	15	89	132	132	82	57	57	65	66	38	23	31	20	8	815
Douglas	3	45	83	67	101	139	87	92	69	54	34	51	27	161	1,013
Edwards	0	17	18	11	11	9	10	18	21	6	5	8	7	123	264
Elk	2	13	23	18	23	18	21	7	9	4	5	5	8	17	173
Ellis	0	11	14	7	8	6	16	5	2	3	4	1	1	21	99
Ellsworth	6	92	113	94	63	62	89	118	65	41	25	22	23	13	826
Finney	3	29	60	41	28	17	37	24	31	27	4	6	13	285	605
Ford	15	120	185	168	143	139	136	115	82	82	40	53	48	455	1,781
Franklin	3	14	30	18	15	28	22	16	16	11	9	4	17	135	338
Geary	4	55	68	50	24	31	46	40	40	22	16	24	12	463	895
Graham	9	39	44	66	44	38	19	27	28	16	9	13	11	228	591
Grant	0	5	4	10	2	3	2	6	2	1	1	2	0	1	39
Gray	12	66	67	68	41	30	43	47	32	20	11	10	4	6	457
Greeley	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Greenwood	8	92	140	136	116	68	75	73	86	51	31	30	27	14	947
Hamilton	1	7	16	11	5	10	6	14	7	4	3	8	5	0	97

Harper	15	81	154	122	82	63	84	91	61	41	27	34	16	126	997
Harvey	0	19	19	13	11	18	3	25	10	10	5	4	11	82	260
Haskell	0	4	3	5	4	2	3	5	2	3	0	4	0	38	73
Hodgeman	0	21	22	24	11	9	8	6	15	14	2	4	4	2	142
Jackson	1	27	70	74	54	40	41	30	33	26	17	16	15	114	558
Jefferson	11	67	106	108	84	44	54	68	60	47	23	32	19	35	758
Jewell	9	114	180	157	121	78	73	106	108	68	39	49	37	120	1,259
Johnson	2	34	58	68	48	31	41	31	33	31	11	22	15	362	787
Kearny	1	9	13	13	4	4	4	20	5	3	3	1	0	8	88
Kingman	4	51	55	59	25	26	39	44	39	18	10	12	17	306	705
Kiowa	7	41	61	57	40	46	42	32	26	25	7	15	4	4	407
Labette, except	0	9	34	39	16	13	18	22	19	15	11	18	8	174	396
Parsons	1	12	23	18	11	31	42	48	33	22	17	18	7	36	319
Lane	0	27	41	38	24	22	11	18	9	6	9	20	5	0	230
Leavenworth, except	7	49	76	68	43	39	51	42	43	26	18	19	19	76	576
Leavenworth city	4	29	45	18	23	13	22	37	18	12	10	18	8	78	335
Lincoln	9	62	84	68	61	52	58	60	32	22	22	16	14	193	753
Linn	4	53	108	98	75	52	60	72	53	44	34	44	30	81	808
Logan	2	5	10	15	10	11	11	8	11	8	1	6	7	3	108
Lyon	7	51	77	84	55	57	53	62	44	37	28	27	19	656	1,257
Marion	15	149	235	213	168	142	185	167	123	87	54	61	32	179	1,810
Marshall	8	85	150	124	90	76	71	74	66	61	26	33	24	17	905
McPherson	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Meade	1	25	38	35	38	25	37	26	24	9	7	20	8	10	303
Miami	4	25	45	61	45	57	38	41	36	40	15	19	12	218	656
Mitchell	4	22	35	42	22	11	24	22	19	8	18	2	4	198	431
Montgomery, except	1	57	78	79	73	57	64	67	69	43	22	41	21	101	773
Coffeyville	2	19	50	22	22	30	44	34	25	25	6	7	7	13	306
Morris	0	15	32	29	22	17	17	24	17	17	7	9	3	23	232
Morton	6	35	42	32	22	18	17	19	16	6	4	6	2	102	327
Nemaha	9	52	62	61	44	39	52	62	38	25	12	20	4	89	569
Neosho	4	32	48	42	35	28	27	39	31	20	20	14	9	155	504
Ness	0	1	1	2	5	0	0	0	0	3	1	0	0	0	13
Norton	6	43	50	58	53	45	52	43	30	29	21	14	19	652	1,115
Osage	7	54	109	91	67	67	76	55	43	34	36	41	21	278	979
Osborne	6	67	104	89	71	47	63	62	57	34	17	20	13	161	811
Ottawa	1	55	74	83	75	48	35	49	35	26	27	23	13	43	587
Pawnee	5	64	82	85	64	71	78	92	64	52	35	39	13	8	752
Phillips	3	59	93	102	66	66	62	49	40	40	29	16	16	325	966
Pottawatomie	4	37	73	92	90	54	44	41	43	22	26	28	13	240	807
Pratt	8	90	102	89	80	67	75	70	67	53	26	18	15	129	889
Rawlins	0	17	26	13	17	10	13	27	12	11	2	5	4	157	314
Reno, except	2	26	42	44	32	13	28	28	32	18	8	9	9	235	526
Hutchinson	0	9	14	9	9	13	13	9	15	8	5	3	3	156	266
Republic	2	59	84	87	47	47	45	59	56	39	23	26	7	16	597
Rice	13	86	107	87	67	59	76	56	79	41	40	26	22	334	1,093
Riley	1	29	61	46	38	73	45	37	30	20	9	25	10	160	584
Rooks	5	43	64	74	59	32	29	50	57	20	19	10	12	117	591
Rush	8	70	78	63	52	41	68	45	52	23	20	10	4	34	568

TABLE XI.—INFLUENZA, 1920—CONCLUDED.

COUNTIES AND CITIES.	Under 1 year.	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 59	60 and over.	Not stated.	Total.
Russell	3	46	57	48	46	27	39	37	19	18	13	13	7	28	401
Saline	1	15	26	29	45	12	12	15	20	11	11	6	2	105	310
Scott	0	0	1	3	2	5	4	2	3	0	0	0	0	0	20
Sedgwick, except	5	24	42	25	26	32	30	48	38	18	9	9	6	68	380
Wichita	6	72	88	57	40	84	101	113	65	43	28	34	31	13	775
Seward	0	14	15	11	5	7	10	12	9	3	2	1	4	58	151
Shawnee, except	3	7	11	14	12	10	7	23	8	4	3	6	4	173	285
Topeka	14	149	188	120	91	126	156	155	124	87	56	62	46	95	1,469
Sheridan	4	41	53	61	35	30	27	21	35	17	13	8	7	34	386
Sherman	2	15	23	11	10	27	19	26	6	13	3	7	5	14	181
Smith	12	83	116	156	119	88	78	86	83	26	33	40	24	33	977
Stafford	9	60	99	85	61	46	38	49	39	23	20	21	9	16	575
Stanton	0	1	5	4	6	3	1	4	0	3	0	0	0	1	28
Stevens	0	2	2	0	0	1	4	1	0	0	0	1	0	1	12
Sumner	12	164	245	220	156	125	181	195	132	79	55	63	45	498	2,170
Thomas	0	6	16	14	8	10	14	10	13	7	2	3	3	193	299
Trego	0	3	3	3	3	0	2	1	5	2	1	2	0	35	60
Wabaunsee	13	80	106	114	96	76	64	64	43	42	28	36	30	58	850
Wallace	1	15	16	9	12	8	15	15	10	6	0	3	1	78	189
Washington	6	33	56	50	51	44	50	56	37	33	24	19	19	102	580
Wichita	0	3	3	2	1	1	2	3	4	0	2	2	0	0	23
Wilson	13	84	133	116	73	62	81	91	48	27	33	24	16	299	1,100
Woodson	2	17	33	31	31	30	41	32	27	23	23	30	12	38	370
Wyandotte, except	5	17	25	26	26	10	22	16	12	20	8	16	14	68	285
Kansas City	15	121	163	87	121	199	221	185	170	121	66	102	61	164	1,796
Totals	526	5,129	7,662	6,967	5,488	4,871	5,450	5,557	4,587	3,105	1,966	2,294	1,569	15,072	70,243

INFLUENZA.

TABLE XII.—Cases reported from counties and first-class cities during 1920, by months.

Counties and Cities.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Totals.
Allen	229	792	39	1	0	0	0	2	0	0	0	0	1,063
Anderson	12	270	10	0	0	0	0	0	0	0	0	0	292
Atchison, except	12	569	4	0	0	0	0	0	0	0	0	0	585
Atchison city	199	601	4	0	0	0	0	1	0	0	0	0	805
Barber	62	314	32	0	0	0	0	0	0	0	0	0	408
Barton	100	231	18	2	0	0	0	0	1	0	0	0	352
Bourbon, except	82	255	5	0	0	0	0	0	0	1	0	0	343
Fort Scott	25	196	8	0	0	0	0	0	0	0	0	0	229
Brown	227	644	126	1	0	0	0	0	0	0	0	0	998
Butler	155	1,393	51	0	0	0	0	2	0	1	0	0	1,602
Chase	139	395	42	0	0	0	0	0	0	0	0	0	576
Chautauqua	87	182	2	0	0	0	0	0	0	1	0	0	272
Cherokee	151	1,655	127	6	0	0	0	0	0	0	0	1	1,940
Cheyenne	49	32	13	1	0	0	0	1	1	2	0	0	99
Clark	153	519	10	22	0	0	0	0	0	1	0	0	705
Clay	253	396	67	1	0	0	0	0	0	1	0	1	719
Cloud	198	380	8	0	3	0	0	0	0	0	1	0	590
Coffey	251	494	46	0	0	0	0	0	0	0	0	0	791
Comanche	28	86	0	0	0	0	0	0	0	0	0	0	114
Cowley	424	1,453	98	6	0	0	0	0	0	0	0	1	1,982
Crawford, except	175	1,704	107	12	0	0	0	0	1	4	7	1	2,011
Pittsburg	101	378	3	0	1	0	0	0	0	0	0	0	483
Decatur	49	506	42	0	0	0	0	0	0	3	0	0	600
Dickinson	155	756	68	1	0	0	0	0	0	2	0	0	982
Doniphan	172	582	59	1	0	0	0	0	0	1	0	0	815
Douglas	143	846	21	1	2	0	0	0	0	0	0	0	1,013
Edwards	185	71	5	0	0	0	0	0	1	1	0	1	264
Elk	64	98	10	0	0	0	0	0	0	0	1	0	173
Ellis	19	80	0	0	0	0	0	0	0	0	0	0	99
Ellsworth	181	460	170	14	0	0	0	0	0	1	0	0	826
Finney	152	441	11	0	0	0	0	0	0	0	0	1	605
Ford	499	1,232	49	0	0	0	0	0	0	0	1	0	1,781
Franklin	94	226	18	0	0	0	0	0	0	0	0	0	338
Geary	49	823	17	0	0	0	0	0	0	2	2	2	895
Gove*	0	0	0	0	0	0	0	0	0	0	0	0	0
Graham	20	565	6	0	0	0	0	0	0	0	0	0	591
Grant	30	7	0	0	0	0	0	0	0	0	2	0	39
Gray	140	280	37	0	0	0	0	0	0	0	0	0	457
Greeley	0	0	0	0	0	0	0	0	0	0	0	0	0
Greenwood	117	735	83	3	0	1	0	0	4	0	4	0	947

TABLE XII.—INFLUENZA, 1920—CONCLUDED.

COUNTIES AND CITIES.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Totals.
Hamilton	81	9	6	1	0	0	0	0	0	0	0	0	97
Harper	198	766	33	0	0	0	0	0	0	0	0	0	997
Harvey	56	193	11	0	0	0	0	0	0	0	0	0	260
Haskell	15	44	14	0	0	0	0	0	0	0	0	0	73
Hodgeman	0	136	0	0	0	0	0	0	0	0	1	5	142
Jackson	179	354	17	0	0	0	3	2	0	0	3	0	558
Jefferson	81	593	79	1	0	0	0	0	0	0	4	0	758
Jewell	369	612	278	0	0	0	0	0	0	0	0	0	1,259
Johnson	505	277	4	1	0	0	0	0	0	0	0	0	787
Kearny	5	74	9	0	0	0	0	0	0	0	0	0	88
Kingman	201	457	40	0	0	0	0	0	0	0	5	2	705
Kiowa	103	250	50	0	0	0	0	0	0	0	4	0	407
Labette, except	61	335	0	0	0	0	0	0	0	0	0	0	396
Parsons	69	234	6	0	0	0	0	0	0	2	8	0	319
Lane	223	7	0	0	0	0	0	0	0	0	0	0	230
Leavenworth, except	131	441	3	0	0	0	0	0	0	0	0	1	576
Leavenworth city	38	294	3	0	0	0	0	0	0	0	0	0	335
Lincoln	172	559	22	0	0	0	0	0	0	0	0	0	753
Linn	210	578	18	0	0	0	0	1	1	0	0	0	808
Logan	46	62	0	0	0	0	0	0	0	0	0	0	108
Lyon	391	850	16	0	0	0	0	0	0	0	0	0	1,257
Marion	227	1,520	60	0	1	0	0	0	0	0	2	0	1,810
Marshall	46	757	101	1	0	0	0	0	0	0	0	0	905
McPherson	0	0	0	0	0	0	0	0	0	0	0	0	0
Meade	168	132	0	0	0	0	0	2	0	0	1	0	363
Miami	94	471	86	1	1	0	0	0	0	0	2	1	656
Mitchell	62	324	45	0	0	0	0	0	0	0	0	0	431
Montgomery, except	31	720	19	0	0	0	0	0	0	0	3	0	773
Coffeyville	8	251	43	0	0	0	0	0	0	0	2	2	306
Morris	2	228	2	0	0	0	0	0	0	0	0	0	232
Morton	264	56	0	7	0	0	0	0	0	0	0	0	327
Nemaha	314	246	8	0	0	0	0	1	0	0	0	0	569
Neosho	69	420	15	0	0	0	0	0	0	0	0	0	504
Ness	0	13	0	0	0	0	0	0	0	0	0	0	13
Norton	35	1,071	9	0	0	0	0	0	0	0	0	0	1,115
Osage	273	624	81	1	0	0	0	0	0	0	0	0	979
Osborne	103	603	99	0	0	0	0	0	0	1	0	5	811
Ottawa	220	248	60	58	0	0	0	0	0	0	0	1	587
Pawnee	181	549	22	0	0	0	0	0	0	0	0	0	752
Phillips	258	684	18	6	0	0	0	0	0	0	0	0	966
Pottawatomie	238	552	16	1	0	0	0	0	0	0	0	0	807
Pratt	48	800	40	0	0	0	0	0	0	1	0	0	889
Rawlins	52	219	42	0	0	0	0	0	0	0	1	0	314

Reno, except	207	319	0	0	0	0	0	0	0	0	0	0	526
Hutchinson	88	173	4	0	0	0	0	0	0	1	0	0	266
Republic	324	238	33	0	0	0	0	0	0	0	0	2	597
Rice	105	556	432	0	0	0	0	0	0	0	0	0	1,093
Riley	79	498	5	2	0	0	0	0	0	0	0	0	584
Rooks	15	551	25	0	0	0	0	0	0	0	0	0	591
Rush	82	462	24	0	0	0	0	0	0	0	0	0	568
Russell	1	279	117	4	0	0	0	0	0	0	0	0	401
Saline	223	77	2	0	4	0	0	0	1	1	0	2	310
Scott	5	15	0	0	0	0	0	0	0	0	0	0	20
Sedgwick, except	115	254	9	0	0	0	0	0	1	0	1	0	380
Wichita	234	535	1	0	0	0	0	0	2	1	0	2	775
Seward	61	85	0	3	0	2	0	0	0	0	0	0	151
Shawnee, except	183	95	1	6	0	0	0	0	0	0	0	0	285
Topeka	162	1,262	36	7	0	0	0	0	0	0	0	2	1,469
Sheridan	43	323	20	0	0	0	0	0	0	0	0	0	386
Sherman	31	142	7	0	0	0	0	0	0	0	1	0	181
Smith	176	677	118	6	0	0	0	0	0	0	0	0	977
Stafford	203	362	10	0	0	0	0	0	0	0	0	0	575
Stanton	12	16	0	0	0	0	0	0	0	0	0	0	28
Stevens	12	0	0	0	0	0	0	0	0	0	0	0	12
Sumner	411	1,709	30	2	0	0	0	1	1	13	3	0	2,170
Thomas	12	286	1	0	0	0	0	0	0	0	0	0	299
Trego	0	21	39	0	0	0	0	0	0	0	0	0	60
Wabaunsee	389	447	14	0	0	0	0	0	0	0	0	0	350
Wallace	32	157	0	0	0	0	0	0	0	0	0	0	189
Washington	177	355	46	2	0	0	0	0	0	0	0	0	580
Wichita	4	17	2	0	0	0	0	0	0	0	0	0	23
Wilson	10	1,023	66	1	0	0	0	0	0	0	0	0	1,100
Woodson	124	240	4	1	0	0	0	0	0	1	0	0	370
Wyandotte, except	209	74	1	0	0	0	0	0	0	0	0	1	285
Kansas City	1,066	701	21	4	0	0	0	0	0	0	0	4	1,796
Totals	15,803	50,209	3,859	188	12	3	3	13	14	42	59	38	70,243

* Estimate of number of cases reported by wire but not confirmed by official reports.

TABLE XIII.—Age and sex distribution of communicable diseases for 1920-1921.

DISEASE.	Year.	Under 1 year.		1 to 4.		5 to 9.		10 to 14.		15 to 19.		20 to 24.		25 to 29.		30 to 34.	
		M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Diphtheria.......	1920	17	11	359	328	756	829	413	489	147	193	53	141	61	99	41	91
do...........	1921	33	19	635	601	1,331	1,507	807	860	294	367	156	274	117	222	82	187
Measles..........	1920	87	75	734	712	1,394	1,486	384	398	242	250	92	86	55	65	39	46
do...........	1921	119	123	1,157	1,090	2,092	2,000	706	750	410	431	169	148	51	105	56	77
Scarlet fever......	1920	33	35	467	424	905	986	490	694	220	307	60	105	30	78	20	39
do...........	1921	45	49	618	613	1,120	1,391	676	896	265	366	102	188	58	104	26	68
Smallpox.........	1920	20	24	121	128	219	253	219	267	299	220	209	184	133	125	152	112
do...........	1921	23	49	163	172	348	332	364	362	351	276	260	183	157	151	166	128
Typhoid fever....	1920	2	1	34	32	97	97	102	96	90	81	66	62	52	44	40	45
do...........	1921	1	0	28	25	93	87	114	88	103	71	94	61	45	34	40	27

TABLE XIII—CONCLUDED.

DISEASE.	Year.	35 to 39.		40 to 44.		45 to 49.		50 to 59.		60 and over.		Not stated.		Totals.	
		M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Diphtheria......	1920	27	49	17	32	6	23	11	8	0	7	74	93	1,982	2,393
do..........	1921	77	117	39	61	12	29	17	39	9	13	102	152	3,711	4,448
Measles.........	1920	24	35	9	15	6	5	3	9	3	5	191	182	3,263	3,369
do..........	1921	32	50	12	38	14	15	11	7	2	10	231	218	5,062	5,062
Scarlet fever.....	1920	13	17	4	7	1	6	2	3	1	2	79	63	2,325	2,766
do..........	1921	22	34	5	9	3	6	0	5	2	4	64	65	3,006	3,798
Smallpox........	1920	170	96	142	82	117	66	110	57	51	29	174	121	2,136	1,764
do..........	1921	200	143	179	124	120	84	141	78	83	60	116	114	2,671	2,256
Typhoid fever....	1920	31	19	14	13	24	12	13	14	11	6	24	32	600	554
do..........	1921	24	23	25	15	19	7	11	6	13	7	30	24	640	475

TABLE No. XIV.—Other infectious diseases classified by sex.*

	Year.	Male.	Female.	Total.
Tuberculosis, all forms	1920	862	974	1,836
do	1921	1,156	1,373	2,529
Mumps	1920	607	503	1,110
do	1921	372	283	655
Chicken pox	1920	1,139	1,071	2,210
do	1921	1,665	1,795	3,460
Pneumonia	1920	1,190	1,062	2,252
do	1921	549	401	950
Whooping cough	1920	1,489	1,584	3,073
do	1921	1,103	1,201	2,304

* The monthly distribution of these diseases may be determined by referring to monthly bulletins.

TABLE No. XV.—Communicable diseases reported in Kansas, 1920-1921.

GROUP 1.

NAME OF DISEASE.	Number reported 1920.	Number reported 1921.
Actinomycosis	2	2
Anthrax in man	1	2
Chickenpox	2,210	3,460
Cholera, Asiatic	0	0
Continued fever lasting seven days	0	1
Dengue	0	0
Diphtheria	4,375	7,882
Dysentery, Amœbic	3	0
Dysentery, bacillary	5	3
Diarrhœa and interitis, under two years	0	2
Erysipelas	71	101
Favus	0	0
German measles	33	70
Glanders	0	0
Hookworm disease	0	0
Influenza	70,243	259
Lethargic encephalitis	9	11
Leprosy	1	0
Malaria	33	21
Measles	6,632	9,782
Meningitis	71	59
Mumps	1,110	655
Ophthalmia neonatorum	12	7
Plague	0	0
Pneumonia (all forms)	2,252	950
Poliomyelitis	26	88
Rabies	0	0
Scarlet fever	5,091	6,535
Septic sore throat	0	12
Smallpox	3,900	4,630
Tetanus	8	12
Trachoma	149	29
Trichinosis	0	0
Tuberculosis (all forms)	1,836	2,529
Typhoid and paratyphoid fever	1,154	958
Typhus fever	0	0
Whooping cough	3,073	2,304
Yellow fever	0	0

GROUP IV.

Pellagra	23	10
Cancer	213	255

GROUP II.—See report of Division of Veneral Diseases.
GROUP III.—None.

DIVISION OF WATER AND SEWAGE.

Annual Report of the Engineer, 1921.

To the Honorable Members of the State Board of Health:

The work of this division has been directed along the same general lines that have been in practice the past few years. The success of this year's work has been due to the potential power of the excellent work of your former engineer, Mr. C. A. Haskins, and the untiring efforts of Miss N. C. Schneider as assistant director of the laboratory, and A. H. Wieters as assistant engineer. Much of the work was quite new to your present engineer, he having been out of the state for three years, and it was only through the loyalty and earnestness of these individuals that the work of this division has been made possible.

FINANCIAL.

The entire income for the Division of Water and Sewage is divided into three parts:

1. Salary fund for the Engineering Division, provided by the University: (*a*) Engineering school; (*b*) state work fund; (*c*) laboratory fund.

2. Sanitary fund No. 9, appropriated to the State Board of Health for the expense incurred in investigations under the water and sewage law.

3. Moneys received from fees established by the State Board of Administration, approved by the State Board of Health adopted under chapter 327, Laws of 1915.

The total of each for the past year is shown as follows:

Salary fund	$4,950.00
Fund No. 9	5,000.00
Fees	14,704.57

This includes a balance on hand July 1, 1921, of $2,014.01.

Expenditures to July 1, 1921 have been as follows:

Salary fund	$6,690.00
Fund No. 9	5,000.00
Fees	11,955.14

Fee fund divided as follows:

Equipment and expense	$2,042.22
Express	933.39
Salaries	8,513.22

It will be noticed that the expenditures for salaries exceeded the salary fund by $1,740. Of this $1,300 was provided by the chancellor through his emergency fund and $440 was taken from State Board of Health fund No. 9, with the approval of the state auditor.

It will be noted that the laboratory was able to maintain the balance of approximately $2,000, which was on hand July 1, 1920. As little new equipment as possible has been bought during the high prices, and it undoubtedly will require some of this balance within the next year or two to replace some of our present equipment. It will also require a considerable portion of this sum whenever the laboratory and engineering offices are combined and moved to a new location.

NEW WATERWORKS PLANTS.

As reported to you last year, there has been considerable activity in the development of waterworks plants. Many of the new plants reported last year have been built, and the following have received final inspections:

Arcadia, May 17, 1921.
Canton, March 24, 1921.
Cheney, September 10, 1920.
El Dorado, September 23, 1920.
Elk City, September 28, 1920.
Erie, June 3-8, 1921.
Florence, May 7, 1921.
Hugoton, February 9, 1921.
Minneola, March 26, 1921:
Portis, April 2, 1921.
Valley Center, November 20, 1920.

Applications for extensions to the present system or for new water systems have been made and permits issued for the same as follows:

Aug. 26, 1920	Augusta	Water improvement.
Aug. 26, 1920	Baxter Springs	Water improvement.
Mar. 21, 1921	Burrton	Water extensions.
Nov. 15, 1920	Caney	Water filtration.
Jan. 19, 1921	Caney	Water filtration revision of plans.
Jan. 19, 1921	Courtland	Waterworks improvement.
July 14, 1920	El Dorado	Waterworks.
Nov. 18, 1920	Ellis	Waterworks improvement.
Sept. 19, 1920	Engelwood	New well.
July 14, 1920	Florence	Water extensions.
Nov. 3, 1920	Galena	Waterworks improvement.
Feb. 18, 1921	Greenleaf	Waterworks improvement.
Feb. 25, 1921	Lawrence	Waterworks extensions.
April 5, 1921	Miltonvale	Water extensions.
July 23, 1920	Minneola	Waterworks.
July 29, 1920	Oakley	Water-pumping station improvement.
Oct. 6, 1920	Osawatomie	Waterworks improvements.
May 21, 1921	Ottawa	Water-filtration plant.
Oct. 4, 1920	Peabody	Waterworks.
Aug. 30, 1920	Portis	Waterworks system.
Oct. 3, 1920	Portis	Waterworks system.
Mar. 21, 1921	Topeka	Water-purification plant.

The plans are being prepared for a water-filtration plant at Sabetha and Valley Falls, due to the failure of their present ground-water supplies. The water-filtration plant, with a new pipe line to the Neosho river, is under consideration at Parsons. Manhattan has recently voted bonds to construct a municipal water-softening and filtration plant.

OPERATION OF WATERWORKS PLANTS.

As reported a year ago, the operation of water-purification plants has been one of the most vital subjects with which this department has had to deal. It has been thought wise to devote attention to this question even at the expense of some of the other work. Accordingly Mr. Wieters has devoted practically all of his time to this work and Mr. Boyce has given a good share of his time to it with Mr. Wieters. This has consisted of a three-day test with the portable laboratory of each water-purification plant, and six months later a thorough inspection of the plant without the aid of the field laboratory. These tests have shown that in the majority of cases the plants are capable of producing very excellent results when properly operated, but that in many cases the plants are receiving poor operation, either on account of ignorance or indifference. With the increasing number of these plants being built, due to the inability to secure adequate ground-water supplies in the eastern half of the state, the question is becoming increasingly important and it will require all of one man's time in the field to look after these plants.

The question of having a short course or conference at the University on the subjects of water treatment has been considered, but so far there has been found no solution of the financial difficulty occasioned in paying the expense of such a course.

Forty per cent of the total population of the state, or 100 per cent of the urban population, is now equipped with water and sewerage systems, discharging sewage, either untreated or otherwise, into the watercourses of the state. Twenty per cent of the total population of the state, or 50 per cent of the urban population, is supplied with surface water. There are now 52 surface-water plants and 195 ground-water plants, or 20 per cent of the total number of water supplies in the state use surface water and supply 50 per cent of the water. It can be clearly seen that the proper operation of the water-filtration plants, together with the proper operation of the sewage-disposal plants, is our most difficult and important problem, if we are to maintain or lower the typhoid-fever death rate which has been established.

SEWERAGE.

A number of sewerage systems which were reported to you a year ago as being either contemplated or under construction have been completed and the final inspections made as follows:

Baxter Springs, January 12, 1921.
Belle Plaine, March 23, 1921.
Colby, November 16, 1920.
Goodland, February 17, 1921.
Hanover, May 26, 1921.
Potwin, September 11, 1920.
Protection, November 18, 1920.
Newton, January 11, 1921.
Scott City, February 5, 1921.
Sedgwick, October 13, 1920.
Smith Center, October 4, 1920.

Following is a list of cities who were granted permits for extensions to or new sewer systems:

Oct. 19, 1920	Abilene	Sewer extensions.
May 19, 1921	Arkansas City	Sewerage.
July 14, 1920	Colby	Sewer improvements.
Mar. 31, 1921	Dodge City	Sewer extensions.
May 31, 1921	Emporia	Sewer-disposal plant.
Nov. 18, 1920	Glasco	Sewer extensions.
Feb. 16, 1921	Glasco	Sewer extensions; revised.
Dec. 12, 1920	Haven schoolhouse	Sewage disposal.
Sept. 27, 1920	Horton	Sewer extensions.
Oct. 28, 1920	Hiawatha	Sewer extensions.
May 16, 1921	Miller rural high school	Sewer and sewage disposal.
Mar. 14, 1921	Neodesha	Sewer extensions.
Feb. 28, 1921	Salina Country Club	Sewerage.
Oct. 15, 1920	Stockton	Sewer system.
July 7, 1920	Topeka	Sewer extensions.
Jan. 18, 1921	Wichita	Sewer extensions.

OPERATION OF SEWAGE-TREATMENT PLANTS.

As reported to you a year ago, it had been impossible to give very much supervision to the operation of sewage-disposal plants on account of the lack of help. Although there has not been sufficient help this year, still a little progress has been made and it is hoped that gradually we may be able to devote more time to this important question. A new form has been adopted for reporting the operation of these plants, and will be made monthly instead of weekly as heretofore. This will make it much easier for the operators as well as this department in checking up the operation of these plants, as it will be less difficult to check from one report each month than four, which are bound to be late and irregular in arriving at the office.

There are now sixty-five municipal sewage-disposal plants in operation and three or four more in the process of design or construction. As referred to under the operation of water-filtration plants, it will require the same careful attention to the operation of sewage plants that should be given to the water-filtration plants in order to get the best results, since neither water filtration nor sewage disposal can take the entire burden in the treatment of water and sewage.

KANSAS RIVER.

Prior to 1920 there was no use made of the Kansas river for public water supplies, and due to the quantity of water flowing at practically all seasons of the year, no nuisance was created by the discharge of sewage into this river, hence the policy of the State Board of Health in not requiring sewage treatment on this river. In 1920, however, the city of Lawrence made application for a permit to use the water from the Kansas river for a municipal water supply. In the spring of 1921 Topeka also made application for the use of the Kansas river water. Both of these cities will be equipped with modern water-softening and filtration plants to treat this water. However, the sewage entering this stream places an undue burden upon water-filtration plants in the form of bacterial contamination, the raw water at Lawrence showing *B. coli* in .1 cc. portions at all times.

The report of the International Joint Commission in its studies of overloading of water-filtration plants places the limit of pollution as exceeded if the annual average number of *B. coli* in the water delivered to any water-purification plant is higher than about 500 per 100 cc., or if in .1 cc. samples of the water *B. coli* are found 50 per cent of the time.

Following this policy of requiring sewage treatment on the Kansas river above Lawrence, it is recommended that permits for discharge of untreated sewage be granted for not later than July 1, 1923, thereby giving the municipalities two years in which to take the necessary steps to treat their sewage properly.

LABORATORY.

The work of the Water and Sewage Laboratory of this division has been carried on practically the same as in former years. The following table shows the total number and character of the analyses made in the laboratory during the past year, July 1, 1920, to June 30, 1921:

	Bact.	*Chem.*	*Miscel.*
City supplies	5,338	332	..
Bottled waters	83	22	..
Private supplies	524	11	..
Railroad supplies	125	1	..
Ice	262	..	..
Ice supplies	36	..	..
Bacteriological, miscellaneous	67	..	..
Chemical, miscellaneous	..	47	..
Chlorides	..	..	23
Sand	..	..	15
Boiler water	..	3	..
Iron	..	1	..
Oil	..	..	1
Algæ	..	..	1
Totals	6,435	417	40—6,892

Of the public health and miscellaneous anaylses we have received fees for only 60 bacteriological, 14 chemical and 2 sand analyses.

In addition to the regular routine work, Mr. Schreiner, the bacteriologist, has given considerable time to investigation and research in the developing of a media which will inhibit certain organisms which are spore formers and resist the effect of chlorination, cause fermentation in lactose broth, but do not confirm as organisms of the *B. coli* group. This investigation has been carried on in conjunction with the department of bacteriology at the University, and although the work has not been entirely completed, enough results have been obtained to satisfy the division that great progress has been made along this line. Doctor Sherwood of the department of bacteriology has rendered valuable assistance in advising on certain policies in this department.

Due to the unusual mildness of the past winter, there are only six natural-ice dealers in the state. Last year there were about eighty-five. Many of the former natural-ice dealers have purchased manufactured ice from licensed manufacturers in this state, resulting in the total number of licenses for ice being diminished by about eighty.

Each year the difficulty of obtaining samples of ice and licensing the dealers is becoming less, undoubtedly due to their becoming accustomed to the procedure. This year licenses have been issued to 118 manufactured-ice dealers, against 35 last year at this time.

CERTIFICATES ISSUED TO RAILROADS, FIRST HALF 1920-'21.

	Mo.	*Da.*	
Anthony & Northern:			
Pratt	12	6	City supply.
Arkansas Valley Interurban:			
Hutchinson	8	27	City supply.
Newton	9	23	City supply.
Wichita	8	10	City supply.

Atchison, Topeka & Santa Fe:	*Mo.*	*Da.*	
Anthony	8	27	City supply. Certificate refused.
Arkansas City	8	27	City supply.
Canton	12	14	Private supply.
Chanute	12	6	City supply.
Cherryvale	10	29	City supply.
Coffeyville	8	10	City supply.
Colony	9	14	Private supply. Certificate refused.
Concordia	12	6	City supply.
Emporia	8	27	City supply.
Englewood	8	27	Private supply.
Florence	12	15	Hauled from Newton.
Frontenac	7	26	City supply. Certificate refused.
Frontenac	9	14	City supply.
Great Bend	8	27	City supply.
Gridley	9	15	Private supply. Certificate refused.
Harper	12	21	City supply.
Holyrood	12	15	City supply.
Hutchinson	8	27	City supply.
Independence	12	6	City supply. Certificate refused.
Kansas City	10	12	City supply.
Kiowa	9	23	City supply. Certificate refused.
Kiowa	12	21	City supply.
Little River	1	3	City supply.
McPherson	9	14	City supply.
Newton	9	23	City supply.
Pratt	12	6	City supply.
Salina	8	10	City supply.
Strong City	9	14	City supply.
Topeka	12	6	City supply.
Wellington	8	27	City supply.
Wichita	8	10	Private supply. Certificate refused.
Wichita	8	10	City supply.
Winfield	8	27	City supply.
Chicago, Burlington & Quincy:			
Atchison	8	10	City supply.
Concordia	8	10	City supply.
Chicago, Rock Island & Pacific:			
Belleville	12	6	City supply.
Goodland	12	10	Private supply. Certificate refused.
Goodland	1	3	Private supply.
Herington	8	27	City supply.
Leavenworth	8	10	City supply.
Liberal	8	27	Private supply.
Phillipsburg	12	6	City supply. Certificate refused.
Pratt	12	6	City supply.
Topeka	8	10	City supply.
Wichita	8	10	City supply.
Kansas City, Kaw Valley & Western:			
Bonner Springs	12	23	City supply.
Kansas City, Mexico & Orient:			
Wichita	8	12	Private supply. Certificate refused.
Wichita	10	5	Private supply.
Wichita	8	10	City supply.
Kansas City Northwestern:			
Seneca	8	24	City supply. Certificate refused.
Kansas City Southern:			
Pittsburg	9	14	City supply.

Kansas Southwestern:	*Mo.*	*Da.*		
Anthony	12	14	City supply.	Certificate refused.
Arkansas City	8	27	City supply.	
Midland Valley:				
Wichita	8	10	City supply.	
Wichita	8	12	Private supply.	Certificate refused.
Wichita	10	5	Private supply.	
Missouri, Kansas & Texas:				
Iola	12	6	City supply.	Certificate refused.
Junction City	8	10	City supply.	
Missouri Pacific:				
Arkansas City	8	27	City supply.	
Atchison	8	10	City supply.	
Coffeyville	8	10	City supply.	
Concordia	8	10	City supply.	
Conway Springs	8	27	City supply.	
Downs	9	15	City supply.	
Greenleaf	8	27	City supply.	
Hoisington	8	27	City supply.	
Independence	8	15	City supply.	
Independence	12	6	City supply.	Certificate refused.
Leavenworth	8	10	City supply.	
McCracken	8	27	City supply.	
McPherson	9	14	City supply.	
Salina	8	10	City supply.	
Topeka	8	10	City supply.	
Wichita	8	10	City supply.	
St. Joseph & Grand Island:				
Hiawatha	12	6	City supply.	Certificate refused.
Hiawatha	12	21	City supply.	
Highland	8	10	City supply.	
Seneca	8	10	City supply.	Certificate refused.
St. Louis & San Francisco:				
Cherryvale	8	10	City supply.	
Ellsworth	8	10	City supply.	
Neodesha	10	29	City supply.	
Pittsburg	9	14	City supply.	
Wichita	8	10	City supply.	
Union Pacific:				
Abilene	8	10	City supply.	
Belleville	12	6	City supply.	
Ellis	9	14	City supply.	
Hiawatha	12	21	City supply.	
Highland	8	10	City supply.	
Junction City	8	10	City supply.	
Kansas City	10	12	City supply.	
Leavenworth	8	10	City supply.	
McPherson	12	14	City supply.	
Manhattan	8	10	City supply.	
Salina	8	10	City supply.	
Sharon Springs	8	27	City supply.	
Topeka	8	10	City supply.	

CERTIFICATES TO RAILROADS, SECOND HALF, 1920-'21.

Arkansas Valley Interurban:			
Hutchinson	4	15	City supply.
Newton	5	10	City supply.
Wichita	5	10	City supply.

Atchison, Topeka & Santa Fe:	*Mo.*	*Da.*	
Anthony	2	15	City supply.
Arkansas City	4	15	City supply.
Atchison	5	3	City supply.
Burlington	5	10	City supply.
Canton	2	23	Private supply.
Chanute	4	15	City supply.
Cherryvale	4	15	City supply.
Coffeyville	4	15	City supply.
Colony	6	14	Shipped from Ottawa C. S.
Dighton	2	23	City supply.
Dodge City	2	15	Private supply.
Elkhart	2	15	Private supply.
Ellinwood	5	24	City supply.
Emporia	4	15	City supply.
Englewood	2	15	Private supply.
Garden City	3	9	Private supply.
Great Bend	2	23	City supply.
Gridley	6	14	Private supply. Certificate refused.
Harper	4	15	City supply.
Hutchinson	4	15	City supply.
Independence	1	31	City supply.
Jetmore	2	23	Private supply.
Kansas City	4	15	City supply.
Kinsley	2	23	City supply.
Larned	6	7	City supply.
Leavenworth	4	15	City supply.
Little River	5	10	City supply.
Medicine Lodge	6	7	City supply.
Minneapolis	2	4	City supply.
Moline	4	15	Hauled from Chanute C. S.
Newton	5	10	City supply.
Osage City	4	15	City supply.
Ottawa	2	15	City supply. Certificate refused.
Ottawa	5	3	City supply.
Pratt	4	2	City supply.
Scott City	2	15	City supply.
Strong City	5	10	City supply.
Topeka	4	15	City supply.
Wichita	5	10	City supply.
Chicago, Burlington & Quincy:			
Atchison	5	3	City supply.
Leavenworth	4	15	City supply.
Chicago, Rock Island & Pacific:			
Bucklin	4	15	City supply.
Goodland	1	3	Private supply.
Herington	5	10	City supply.
Horton	5	24	Private supply.
Leavenworth	4	15	City supply.
Liberal	2	23	Private supply.
McFarland	4	2	Private supply.
Phillipsburg	4	15	City supply.
Pratt	4	2	City supply.
Topeka	4	15	City supply.
Wichita	5	10	City supply.
Kansas City, Kaw Valley & Western:			
Bonner Springs	5	10	City supply.
Kansas City	4	15	City supply.
Kansas City Northwestern:			
Seneca	4	15	City supply.

	Mo.	*Da.*		
Kansas City Southern:				
Pittsburg	5	10	City supply.	
Kansas City Terminal:				
Kansas City	4	15	City supply.	
Kansas Southwestern:				
Anthony	2	15	City supply.	
Arkansas City	4	15	City supply.	
Missouri, Kansas & Texas:				
Moran	4	15	City supply.	
Paola	5	10	City supply.	
Parsons	4	15	City supply.	
Midland Valley:				
Wichita	5	10	City supply.	
Missouri Pacific:				
Arkansas City	4	15	City supply.	
Atchison	5	3	City supply.	
Coffeyville	4	15	City supply.	
Conway Springs	4	15	City supply.	
Council Grove	4	15	City supply.	
Downs	5	24	City supply.	
Ft. Scott	4	15	City supply.	
Greenleaf	1	15	City supply.	
Hoisington	5	10	City supply.	
Horace	2	15	Selkirk wells.	
Independence	2	10	City supply.	
Larned	6	7	City supply.	
Leavenworth	4	15	City supply.	
Marquette	1	15	Private supply.	
Osawatomie	4	2	City supply.	
Topeka	4	15	City supply.	
Washington	6	7	City supply.	
Wichita	5	10	City supply.	
St. Joseph & Grand Island:				
Highland	5	10	City supply.	
Marysville	4	15	City supply.	
Seneca	4	15	City supply.	
St. Louis & San Francisco:				
Cherryvale	4	15	City supply.	
Ellsworth	5	10	City supply.	
Ft. Scott	4	15	City supply.	
Neodesha	4	15	City supply.	
Pittsburg	5	10	City supply.	
Wichita	5	10	City supply.	
Wichita Northwestern:				
Pratt	5	24	City supply.	
Union Pacific:				
Ellis	2	4	Private supply.	
Garrison	2	4	Private supply.	
Havensville	1	15	Private supply.	
Highland	5	10	City supply.	
Kansas City	4	15	City supply.	
Lawrence	1	15	Private supply.	Certificate refused.
Leavenworth	4	15	City supply.	
Marysville	4	15	City supply.	
Miltonvale	2	4	Private supply.	
Oakley	2	4	City supply.	
Onaga	1	15	Private supply.	Certificate refused.
Onaga	5	24	Private supply.	
Plainville	2	4	Private supply.	
Sharon Springs	2	4	City supply.	
Topeka	4	15	City supply.	

LICENSES ISSUED TO BOTTLED-WATER COMPANIES, JULY 1, 1920, TO JUNE 30, 1921.

Aug. 28, 1920	Abilene	Abilena Company.
Jan. 14, 1921	Argentine	Tucker Mineral Springs.
Aug. 12, 1920	Augusta	Augusta Ice, Fuel & Grain Co.
Nov. 16, 1920	Coffeyville	Crystal Springs Water Co.
Nov. 30, 1920	El Dorado	Polar Water Company.
Aug. 12, 1920	Fort Scott	H. D. Jensen.
Sept. 15, 1920	Geuda Springs	Geuda Springs Health Resort Co.
May 2, 1921	Havenhill	Eugene Ridge. Last quarter.
Aug. 28, 1920	Hiawatha	Sycamore Mineral Springs Co.
Oct. 15, 1920	Hutchinson	Bennett & Co.
Oct. 15, 1920	Hutchinson	T. J. Bixler.
Oct. 6, 1920	Independence	Aganippe Springs Water Co.
April 11, 1921	Ottawa	J. H. Crawford. Last quarter.
Jan. 14, 1921	Ottawa	E. E. Heth & Co.
Oct. 29, 1920	Parsons	Globe Bottling Works.
Oct. 6, 1920	Parsons	Rockheart Mineral Water Co.
July 30, 1920	Salina	Salina Bottling Works.
Nov. 2, 1920	Topeka	Topeka Pure Water Co.
June 7, 1921	Valley Center	I. V. Burnham. Last quarter.
Oct. 6, 1920	Waconda Springs	Waconda Sanitarium.
Aug. 14, 1920	Wichita	Distilled & Aërated Water Co.
Aug. 23, 1920	Wichita	Viola Springs Water Co.
Aug. 6, 1920	Wichita	Wichita Vinegar & Bottling Works.

BOTTLED-WATER COMPANIES FROM OTHER STATES.

Nov. 16, 1920	Brooklyn, N. Y.	Kalak Water Co.
Oct. 23, 1920	Manitou, Colo.	Manitou Mineral Water Co.
Sept. 20, 1920	Portland, Maine	Hiram Ricker & Sons.
Oct. 6, 1920	Santa Barbara, Cal.	Veronica Medicinal Springs Water Co.
Oct. 25, 1920	Waukesha, Wis.	White Rock Mineral Water Co.

OIL AND GAS WELL WASTE.

As reported to you a year ago, there is still grave danger of a large number of our water supplies being destroyed, due to the discharge of salt water and oil into the waters of the state on account of improperly cased wells or improper plugging of abandoned wells.

Considerable interest was shown at Emporia, and the mayor invited representatives of all the cities interested in this subject to meet in Emporia the latter part of October, 1920. A representative of the attorney-general's department and your engineer were also invited to be present. After a thorough discussion of the subject a committee was appointed to draft a tentative bill, with recommendations that another meeting be called and the bill be considered by representatives from the various cities. Several meetings were held to consider this bill. The state geologist was called in, as well as several representatives of the oil industry. During this time your engineer aided by mimeographing copies of any proposed legislation or changes thereto, keeping all the cities informed on this subject.

Just before the bill was to be introduced considerable agitation against it was started by the oil men, and a hearing before the joint committee of the house and senate on oil and gas was held, at which time the oil interests had about seventy-five representatives present.

In response to the call for those who were in favor of the bill, the state geologist and your engineer were the only ones present who said a word for the bill, although there were representatives of several of the cities present who had been in favor of the bill. In response to the call for those not in favor the oil interests were well organized and there was so much agitation against the bill that Senator Hegler, who had been requested to introduce it, announced that it would not be introduced, since none of the cities seemed to have interest enough to stand up for the bill at that time; consequently the question was dropped. Later another bill was introduced on this subject, but your engineer is not familiar with it, since it has not been published.

MAUSOLEUMS.

During the past year two permits have been issued for public mausoleums, one built in Old Mission cemetery at Wichita and the other at Wellington.

During the fall of 1920 your engineer was requested by the secretary to make an inspection of different types of mausoleums in other states to determine if possible what should be included in the rules and regulations of the Board in order to comply wtih the provisions of chapter 85 of the laws of 1917 in regard to the building of mausoleums in this state. An inspection was made of a number of poor mausoleums as well as a number of good ones, resulting in certain rules and regulations being adopted, embodying two main features in mausoleum construction:

1. To construct the building of such materials as are known at the present time to be most permanent, and to so design it as to eliminate spaces where disintegration can take place without opportunity for inspection and repair.

2. That construction shall be such that it will provide satisfactory ventilation and remove any chance of odors entering unused crypts or the main corridors.

In November, 1920, your engineer was informed by a Chicago architect that two mausoleums were being constructed in Kansas which did not conform to the standards which he was required to adhere to in the design of a mausoleum in this state. The question was investigated, and it was found that in March, 1919, correspondence on this subject had been had with Charles B. Hudson, attorney for Latchaw Brothers, at Wichita, at which time a sketch of the sanitary scheme used in getting certain government patents was submitted. No dimensions nor sizes and no design nor specifications for the building were included, and Mr. Hudson was informed by telegram on March 31 and by letter on the same date that it would be necessary for his clients—that is, the Latchaw Brothers—to submit detailed plans and specifications for the proposed work. On December 2, 1920, on advice of the attorney-general's office, an order was issued to the Latchaw Brothers to stop work on the construction of this mausoleum until a certificate was obtained in accordance with the provisions of section 1, chapter 85 of the Laws of 1917. This order was issued for both the mausoleum at Wichita and the one at Augusta being constructed by this company.

No attention was paid to this order, and work was continued, and after considerable correspondence some partial plans as furnished by the stone contractor were submitted. These showed no reinforcing steel nor ties between the outside wall of Bedford stone, the middle wall of hollow tile and the interior crypt construction of concrete. Your engineer was informed that they did not have any plans showing reinforcing steel, but had some made after all the work had been completed.

Since the work had been done in violation of the law, with no visible intention of trying to comply even when an order was issued to stop construction, the following disposition of the matter was made, both for the mausoleum at Wichita and the one at Augusta:

WHEREAS, Latchaw Brothers, per C. R. Latchaw, of Wichita, Kan., have made application for permit to construct mausoleum in Memorial Lawns cemetery at Wichita, Kan., in accordance with chapter 85 of the Laws of Kansas, and whereas, section 1 of this act states:

> SECTION 1. That hereafter when any person, firm or corporation shall desire to build, construct or erect any mausoleum, vault or burial structure, the same to be built or constructed entirely above the ground, or partly by excavation, and to be built, constructed and erected so that the same may contain one or more deceased human bodies for permanent interment, before proceeding to build, construct or erect such mausoleum, vault or other structure, shall present and file a copy of all the plans and specifications for such construction with the State Board of Health of the state of Kansas, and before approving such plans and specifications said Board of Health shall be satisfied beyond any doubt that the said mausoleum, vault or other structure would be absolutely permanent and sanitary, and if approved, said approval shall be evidenced by a certificate in writing signed by a majority of all the members of said Board of Health may proceed with the construction and erection of such mausoleum, vault or other structure.

WHEREAS, This said mausoleum was already under construction and about completed before application for the said permit, plans and specifications were submitted, thereby making it impossible for the Board of Health to make any changes in said plans and specifications owing to the fact that application was not made before work was started as specified in section 1 of the act.

WHEREAS, Charles B. Hudson, 213 Schweiter building, Wichita, Kan., representative for the Latchaw Brothers, was notified by both letter and telegram on March 31, 1919, that it would be necessary for his clients to submit plans and specifications for approval: therefore, be it

Resolved, That these plans and specifications be "accepted for filing," since under this act the Board would not have power to approve said plans unless they were submitted before construction was begun.

S. J. CRUMBINE,
Secretary State Board of Health.
ALBERT H. JEWELL,
Engineer State Board of Health.

O. D. WALKER,
C. H. EWING,
J. T. AXTELL,
H. L. ALDRICH,
O. E. OSBURN,
B. BELLE LITTLE,
J. J. ENTZ,
C. H. LERRIGO,
Members of Board.

SWIMMING POOLS.

Although very little time has been available, some studies have been made towards recommendations for swimming-pool legislation. Mr. Schreiner, the bacteriologist, has conducted a series of tests on the University swimming pool located in Robinson Gymnasium, but due to the shifting of the swimming population from the indoor pool to the outside swimming places in the warm weather, he has not been able to complete his investigation. Your engineer has had conferences with several engineers from some of the eastern states where extensive investigations have been made, and it would seem important that some power be given the State Board of Health to make rules and regulations regarding the construction, equipment and care of public swimming pools. There has been considerable activity along this line of construction during the past year and in several cases the advice and opinion of this division has been asked, which demonstrates the important service which this division can render along this line, with its experience in the treatment of water and its well-equipped laboratory for making analyses which should be required in the operation of swimming pools.

SANITARY SURVEYS.

From previous reports it will be remembered that the municipal water supplies of El Dorado and Augusta were rendered unfit for use on account of their pollution by oil and salt waste, forcing the inhabitants to resort to the use of their private shallow wells, bottled water, etc. During the summer of 1920 an extensive survey of the sanitary conditions in the El Dorado, Augusta and Peabody oil fields was made, principally in the cities of Augusta, El Dorado, Florence, Marion and Peabody, the field laboratory being set up at advantageous points and samples of water from all the private shallow wells, bottled waters and city supplies were analyzed and placards placed on all condemned sources. This work was done in coöperation with the county and city health departments, and undoubtedly resulted in the elimination of a considerable amount of water-borne disease.

ORDERS.

During the past year no orders for water or sewage installations have been issued.

The order which was issued in 1918 to the Parsons Water Company for reconstruction and addition to their water-filtration plant was not followed up, due to the fact that the city got into a legal mix-up with the water company, and it was not until 1920 that the question was settled by the purchase of the water plant by the city. The city voted on a $500,000 bond issue on June 28 for extensive repairs to the pumping station at the Neosho river, pipe line to the city, new water-filtration plant and pumping station, and additions to the distribution system. This carried by a large majority. This will insure an adequate supply of pure water, which has been needed for a long time.

The city of Independence has been denied permits for sewer extensions on account of not providing a second sewage-disposal plant for that part of the system not taken care of by the present sewage-disposal plant. As referred to in last year's report, it was an impossibility for the city to build a second plant, since the law limited the amount which any city could expend on sewage disposal to $30,000. The city of Independence, however, showed their good faith in this matter by having their representative put through a bill which increased the limit from $30,000 to $100,000, and there evidently will be no difficulty in getting the necessary installation at Independence.

The order which was issued to the city of Salina for extending the outfall sewer some two miles below its present location has been tentatively held up due to the changes before mentioned regarding the use of the Kansas river for public water suplies. In conference with the city commissioners your engineer advised that sewage treatment would be more effective in removing the nuisance at Salina and decidedly more effective in the protection of the city water supplies at Topeka and Lawrence, and probably not as expensive as extending the outfall sewer the distance it was contemplated.

The order which was issued for sewage disposal at Emporia has resulted in the city having plans and specifications made for a disposal plant, taking care of the larger portion of their sewage. This has been approved and permit issued for its construction. Plans and specifications are being prepared for the second sewage-disposal plant, which will take care of a population of about 1,000, and it is expected that the construction of these plants will go forward in the very near future.

Respectfully submitted,

ALBERT H. JEWELL.

Annual Report of the Engineer, 1922.

To the Honorable Members of the State Board of Health:

The work of this division during the past year has been limited very largely on account of the lack of funds and personnel. An endeavor has been made to do as much as possible with the resources available, and it is trusted that the results will be satisfactory.

Mr. Wieters, who had been principal assistant engineer during the previous year, resigned on October 15 to become chief engineer for the South Dakota State Board of Health. His place was not filled until December 1, when Mr. Earnest Boyce, the second assistant, was promoted, leaving the position of second assistant vacant until February 1. This was then filled by Mr. Paul Fox, a member of the engineering faculty of the University. The previous arrangement had been to have Mr. Wieters continue through the entire year on full time and Mr. Boyce on full time until February 1, after which time Mr. Boyce would have put in full time as a member of the faculty of the School of Engineering.

The following resignations were received during the year: A. H. Wieters, October 15, 1921; Cassandra Ritter, July 23, 1921; Elizabeth Bulla, August 15, 1921; Wm. L. McPherson, February 1, 1922; Paul S. Jackson, March 15, 1922.

The following appointments were made: S. C. Johnson, September 1, 1921; Glen Ballard, October 1, 1921; Paul Fox, February 1, 1922; T. L. Johnson, March 20, 1922.

FINANCIAL.

The entire income for the Division of Water and Sewage is divided into three parts:

1. Salary fund for the engineering division, provided by the University: (*a*) engineering school; (*b*) state work fund; (*c*) laboratory fund.

2. Sanitary Fund No. 9, appropriated to the State Board of Health for the expense incurred in investigations under the water and sewage law.

3. Moneys received from fees established by the State Board of Administration, approved by the State Board of Health. Adopted under chapter 227, Laws of 1915.

The total of each for the past year is shown as follows:

Salary fund	$6,430.00
Fund No. 9	3,000.00
Fees	17,237.25

This includes a balance on hand July 1, 1921, of $3,246.75.

Expenditures to June 30, 1922, have been as follows:

Salary fund	$6,430.00
Fund No. 9	3,000.00
Fees	12,308.65

Fee fund, divided as follows:

Equipment and expense	$2,802.12
Express	329.56
Salaries	9,176.97

It will be noticed that the appropriation known as fund No. 9, for expenses incurred in investigations under the water and sewage law, was reduced to $3,000, the annual appropriation for this work having been $5,000 in the past. This reduction coming at a time when the work of the department was greatly increased has meant that it has been impossible to do all the work prescribed for this division. The Water and Sewage Laboratory has been kept unusually busy, and although much of the increased work has been analyses from which no financial return was made, still with the increased number of natural ices during the past year, it has been possible to increase the balance to approximately $4,928.60. This balance is considered necessary in order to place the laboratory on a sound financial basis, owing to the fact that the laboratory has to depend entirely on fees for its maintenance, and owing to the fact that there is a good deal of irregularity in the amount of fees which are received from year to year as well as irregularity in expenditures for equipment.

NEW WATERWORKS PLANTS.

The activity reported to you in the last annual report in the construction and improvements of waterworks plants has continued. The following plants have been completed during the past year:

Paola	Water-filtration plant.
Caney	Water-filtration plant.
Osborne	Water-filtration plant.
Topeka	Water-filtration plant.
Ottawa	Water-filtration plant.
Greenleaf	New wells and pumping station.
Victoria	New system.
Bird City	New system.
Elgin	New system.
Hoxie	New system.

Applications for extensions to present systems or for new water systems have been made and permits issued for the same as follows:

July 13, 1921	Osborne	Water-filtration plant.
Aug. 16, 1921	Bennington	Water improvements.
Aug. 16, 1921	Emporia	Water improvements.
Aug. 16, 1921	Peabody	Water improvements.
Sept. 8, 1921	Bird City	Waterworks.
Sept. 29, 1921	Victoria	Waterworks.
Oct. 18, 1921	Parsons	Water improvements.
Nov. 16, 1921	Elgin	Water supply.
Dec. 12, 1921	Larned	Water improvements.
Dec. 22, 1921	Marion	Water-filtration plant.
Dec. 28, 1921	Hoxie	Water supply.
Jan. 21, 1922	Belpre	Water supply.

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Jan. 25, 1922	Sabetha	Water improvements.
Feb. 24, 1922	McCracken	Water improvements.
Mar. 6, 1922	Howard	Waterworks with filtration plant
Mar. 23, 1922	Hoisington	Water improvements.
Mar. 29, 1922	Parsons	Water-filtration plant.
May 22, 1922	Colony	Water system with filtration.
May 27, 1922	Chanute	Water improvements.
May 27, 1922	La Crosse	Water improvements.
June 19, 1922	Utica	Water supply.

Your special attention is invited to the fact that the city of Marion finally decided to construct a modern water purification plant and provide a safe domestic water supply. It will be remembered that for several years the State Board of Health has made an effort to have this water supply made safe. In order to get around the provisions of the water and sewage law the city officials had declared that the old water supply was not for domestic purposes. The construction of this plant is well under way, and undoubtedly it will be completed some time during the fall of this year.

Another very encouraging development has been the progress made at Parsons during the past year. It will be remembered that for several years the State Board of Health has made an effort to improve the quality of this water supply. The plant was formerly owned by a private company, which was ordered by the State Board of Health to make certain improvements. The company went into the hands of the receiver, however, and later the city purchased the plant, and since that time there has been considerable difficulty in getting some of the legal phases straightened out. During the past year, however, a bond issue for $500,000 was carried by a big majority and plans and specifications have been prepared for a modern water-purification plant. These were approved and contract has been let for the work. This no doubt will be completed during the coming year.

The water supplies of both Caney and Ottawa have been improved by the installation of modern water-filtration plants, and thereby increases the number of safe water supplies in the state.

The city officials of the city of Iola were cited to appear before the State Board of Health in its quarterly session to show reason why an order should not issue from the State Board of Health requiring the improved treatment of the Iola city water supply. Iola obtains its water supply from the Neosho river, pumping the water into basins, where it is allowed to settle. Part of the time chemicals had been applied to the water and part of the time there was no treatment. Water filtration was recommended. City officials reported that if the State Board of Health would be lenient they would start making arrangements at once to build this plant within the next two years.

There are now only eight surface-water supplies in the state which do not have water-filtration plants. These represent a potential danger and it is hoped that city officials will see their way clear during the coming year to provide filters. Most of these plants already have settling basins which remove part of the turbidity, but depend on chlorine for the routine bacterial removal, which should be used only as an additional safeguard.

On account of the decrease in the funds for salaries and funds for traveling expenses, it has been found impossible to continue the field work with the portable laboratory on the testing of water-filtration plants. This is to be regretted, since undoubtedly it is one of the most valuable pieces of work that this division has been doing in the past. It is hoped some of this work may be done during the next year, but the outlook is not very bright with the funds which will be available.

SEWERAGE.

Following is a list of sewer systems which have been completed and final inspections made during the past year:

Atwood	Sewerage and sewage disposal.
Plainville	Sewerage and sewage disposal.
Stockton	Sewerage and sewage disposal.
Elgin	Sewerage and sewage disposal.

Following is a list of cities that were granted permits for new sewer systems or for extensions to old systems:

July 28, 1921	Atchison	Sewer extensions.
Aug. 19, 1921	Chanute	Sewer extensions.
Aug. 16, 1921	Iola	Sewer extensions.
Sept. 1, 1921	Abilene	Sewer extensions.
Nov. 16, 1921	Abilene	Sewer extensions.
Nov. 23, 1921	Burlington	Sewer extensions.
Nov. 25, 1921	Elgin	Sewers and sewage disposal.
Dec. 2, 1921	McPherson	Sewer extensions.
Dec. 10, 1921	Ottawa	Sewer extensions.
Dec. 14, 1921	Salina	Sewer extensions. Disapproved.
Dec. 17, 1921	Lindsborg	Sewer extensions.
Dec. 29, 1921	Ellis	Sewer extensions.
Jan. 10, 1922	Humboldt (refinery)	Sewer extensions.
Jan. 16, 1922	Ottawa	Sewers and sewage disposal.
Jan. 27, 1922	Oberlin	Sewers and sewage disposal.
Feb. 2, 1922	Hoxie	Sewers and sewage disposal.
Feb. 22, 1922	Topeka	Sewer extensions.
Feb. 18, 1922	Topeka	Sewer extensions.
Feb. 28, 1922	Columbus	Sewer extensions.
Feb. 28, 1922	Salina	Sewer extensions.
Mar. 6, 1922	Howard	Sewers and sewage disposal.
Mar. 20, 1922	Wichita	Sewer extensions.
Mar. 24, 1922	Valley Falls	Sewer extensions.
Mar. 30, 1922	Coffeyville	Sewer extensions.
April 6, 1922	Peabody	Sewer extensions.
April 25, 1922	Almena	Sewers and sewage disposal.
April 25, 1922	Hiawatha	Sewer extensions.
May 6, 1922	Manhattan	Sewer extensions.
May 13, 1922	Sharon Springs	Sewers and sewage disposal.
May 22, 1922	Wa Keeney	Sewers and sewage disposal.
May 27, 1922	Ellinwood	Sewers.
May 29, 1922	Topeka	Sewer extension No. 56.
June 3, 1922	Fort Scott	Sewer extensions.
June 17, 1922	Peabody	Sewer extensions.
June 20, 1922	McPherson	Sewer extensions.

In granting permit for the extension to the sewer system at Olathe it was with the provision that a sewage-disposal plant would be built within the next two years. This was agreed to by the city officials, who were cited to appear before the State Board of Health.

An application for sewer extensions was made by the city of Salina, but was first disapproved on account of the conditions existing in the Smoky Hill river below the city of Salina. For a number of years complaints have been received by this department and an order had already been issued in an effort to remedy this condition. It was therefore felt that under these circumstances the stream should not be overburdened by any additional sewage from any sewer extensions. Later on the city manager, city attorney and city engineer of Salina appeared before the Board in quarterly session and agreed to proceed with the necessary investigation and preparation of plans and specifications for the revamping of the sewer system to include an approved type of sewage-treatment plant, the sewage-disposal plant to be under construction by January 1, 1924. With this provision a permit was granted for the extensions to the sewer system.

Numerous complaints were received from property owners below Parsons on Labette creek during the past year due to the nuisance created by the discharge of improperly treated sewage from the city of Parsons. It will be remembered that the city of Parsons was ordered several years ago to construct additional treatment plant and that a contract was let for this work in 1917, but was disapproved by a federal board having jurisdiction over construction work during the war, as a war-time measure. In an interview with the city officials of Parsons your engineer was informed that work would begin at once in getting ready for the construction of this plant, and later reports from the commissioner indicate that the contract will be let this summer for this work. The city of Parsons has had its hands full during the past year in trying to provide an adequate water supply, and I believe that the commissioners will take care of the situation in a satisfactory manner.

Many complaints have been received about the condition of Cow Creek below the city of Pittsburg. Previous orders of the Board have resulted in the city commissioners placing the matter before the citizens in the form of a bond election for the necessary funds to build a treatment plant. Two elections have resulted in the question being voted down. At a quarterly meeting of the State Board of Health held in Pittsburg a resolution was passed urging the city commissioners to do everything in their power to remedy the situation, and the city commissioners have promised to place the matter before the citizens in the fall election. The present law which requires the voting of funds for sewage disposal in first-class cities makes it impossible for city officials to carry out orders issued by the State Board of Health for sewage treatment.

Word has recently been received that the city of Emporia is going ahead with the construction of the main sewage-treatment plant. It will be remembered that for a number of years an effort has been made to have the sewage from this municipality treated before being discharged into the Neosho river on account of the many municipalities below which use this stream as a source of their water supply. The situation finally became so acute that permits for extensions to the sewers were refused, with the result that the city promised to put in sewage treatment if the extensions would be allowed. Plans and specifications were therefore prepared and approved by this department in July, 1920. The bond issue for the construction carried, but the commissioners decided at that time construction costs were so exceedingly high that it did not seem advisable to go ahead with construction at that time. At the quarterly meeting of the State Board of Health, held in Topeka in February, order was issued for the city of Emporia to proceed with the construction of this disposal plant. Undoubtedly this plant will be completed within the coming year and will remove a potential source of danger to the water supplies below.

A second sewage-disposal plant has been under construction to take care of a portion of the city which could not be sewered to the main sewage-disposal plant. This plant is about completed and ready for operation.

In compliance with suggestions given by this department, the Columbus sewage-disposal plant is being entirely overhauled and will be ready to be put into operation within a short time. This plant should then be capable of treating the sewage in a satisfactory manner.

OPERATION OF SEWAGE TREATMENT PLANTS.

There has been some difficulty in the operation of sewage-treatment plants in the state within the past year, due to the introduction of milk wastes into the municipal sewer systems. The municipal sewage-disposal plants have been designed to treat domestic sewage only and are not of the design which will take care of industrial wastes. In all these cases we have advised the construction of a private disposal plant for the milk factory, the effluent from this plant being allowed to discharge into the municipal sewer system. Milk wastes have caused trouble at Garnett, Holton and Council Grove.

MAUSOLEUMS.

There has been little activity in mausoleum construction, probably due to financial conditions. The community mausoleum in Old Mission cemetery in Wichita has been completed and is a model of good construction. Community mausoleums are being considered in El Dorado, Atchison and Kansas City, but final plans and specifications have not been submitted. Only a few private mausoleums have been constructed.

OIL AND GAS WELL WASTES.

As reported to you in previous reports, there is still a critical condition with respect to the pollution of the waters of the state by the promiscuous discharge of salt water and oil wastes from oil and gas wells. Within the past year the chlorides increased materially, not only in Doyle creek and the Cottonwood river, but down into the Neosho river, making the use of the Neosho water impossible as a domestic supply at several of the cities below. At Burlington the chlorides in the weekly samples submitted by the Burlington water superintendent showed chlorides as high as 1,800 parts per million. The chlorides may have been higher at other times, however. The other cities, namely, Chanute and Oswego, complained of the condition of the water, and in some cases it was necessary to ship in drinking water during this condition of the river. Fortunately the condition lasted only a few weeks and the heavy rains of March and April have succeeded in diluting the contamination so that it is not noticeable at the present time. It is only a question of a few months until this condition will return again when the flow of the Cottonwood and Neosho reaches the ordinary minimum.

SWIMMING POOLS.

There has been a continued interest in the construction of municipal swimming pools and this department has given advice along this line, although we have no rules and regulations governing swimming pools. In some instances engineers have submitted plans and specifications for our approval before construction. It would seem advisable to give the State Board of Health some power in the supervision over the construction and operation of swimming pools, and it is recommended that any legislation along this line correspond to the general scheme used in the water and sewage law, namely, that of requiring permits for construction and operation, which will make it necessary for plans and specifications to be submitted for approval before construction is begun.

SURVEY OF THE KANSAS RIVER AND ITS TRIBUTARIES.

Representatives of cities on the drainage area of the Kansas river and its tributaries were requested to be present at a quarterly meeting of the State Board of Health, at which time the question of the pollution of the waters of the state by untreated sewage from these cities was discussed. This question was considered owing to the fact that the cities of Topeka and Lawrence had made application for the use of the water of this stream for domestic water supply and have constructed modern water purification plants for its treatment. Many of the cities felt that the sewage from their cities had no influence on the condition of the water at Topeka or Lawrence and that a survey of the stream would indicate this condition. However, it was decided that it would be cheaper and more satisfactory to conduct one large survey than to have each city try to carry on a separate survey; therefore it was requested that the State Board of Health conduct a survey, the report of which would be available to all the cities interested in this problem. As directed, your engineer went over the ground with an engineer from the United States Public Health Service and has conducted the survey along the lines recommended in the report of this engineer. Owing to the lack of funds it is impossible to carry on this survey as intensively and as completely as the situation would warrant. A complete set of samples is being collected twice each month at regular sampling points over the entire drainage area. These are being collected by a representative of this department and shipped in iced cantainers to the Water and Sewage Laboratory. This survey will be continued for twelve consecutive months, and the results of analysis, together with other data, such as rainfall, weather conditions and stream flow, will be included in a report, with conclusions and recommendations. So far the investigation has covered a very dry, cold period with low flow of water, and a very wet season with almost flood stages in the river. It is hoped that we may have during the rest of the year some average conditions, so that at the end of the twelve months the report will show the bacterial conditions of the stream under various weather conditions.

COÖPERATION OF THE UNIVERSITY.

One of the outstanding features of the year's work has been the splendid coöperation of the University officials. This coöperation has been not only of a financial nature but has also been of a personal interest and appreciation of the work of this division.

On April 19, 20 and 21 a three-day school for municipal officials was conducted at the University. The faculty for this school consisted of such men as W. C. Hoad, former engineer for your Board and now professor of sanitary engineering at the University of Michigan; A. V. Graf, chief chemist of the water-filtration plant at St. Louis, Mo.; your secretary; a large number of the consulting engineers from Kansas City; an engineer from the United States Public Health Service, and a number of the faculty of the University of Kansas. The school was well attended and an unusual amount of interest was displayed in the subjects which were presented. There was practically 100 per cent attendance at all classes.

The traveling expenses incurred in bringing the outside speakers for this occasion were taken care of by the University, and since this work is of such vital interest to the health of the citizens of the state, it in reality means an additional appropriation for this division. The spirit of the University faculty in preparing papers and talks for this school and the assistance which they gave us was the finest I have ever seen.

STATE WORK.

This department has been called upon by the Board of Administration, through its business manager, to investigate the water supplies of the Topeka State Hospital, the Norton State Sanatorium and the Larned State Hospital. Contracts and specifications were prepared for the construction of wells as well as pumping equipment for the Topeka State Hospital. The contract has been let for this work, the wells have been completed and the contract for the pumping equipment has been let, and undoubtedly the new equipment will be installed the next few months.

At Norton and Larned recommendations of this department are being carried out, and as soon as full information is received plans and specifications will be prepared for this work.

It is a pleasure for this department to reciprocate in this coöperation which the University and Board of Administration have shown. The budget for the coming year allows for two full-time assistant engineers and will make possible work of this nature.

LABORATORY.

The work of the Water and Sewage Laboratory has been greatly increased during the past year, mainly due to the special investigation of the pollution of the Kansas river and its tributaries. During the past winter conditions were such as to provide a plentiful supply of natural ice. In most cases there had been but very little rainfall for some time prior to the freezing period, so that most of the water in the ponds and streams was very clear and free from surface wash and contamination, so that a very large percentage of the samples of natural ice which have been submitted has been of exellent quality. It will be remembered that the previous year we had the reverse of this condition, in that we had only six natural-ice dealers in the state. This year it is estimated that there are about 100, and 69 licenses have already been issued. The manufactured-ice dealers do not start up their plants until late in the spring, so that it is impossible to secure samples and issue licenses as soon as for the natural-ice dealers. So far this year there have been 79 licenses issued to manufactured-ice dealers to apply on the year 1922. It was requested of the attorney-general's office that action be taken against the following, without result, and they remain delinquent:

Willard Coal and Ice Company, Baxter Springs.
Burlingame Ice Company, Burlingame.
Jewell County Farmers Union Coöperative Association, Burr Oak.
Morrowville Ice Company, Morrowville.
Staffordville Ice Company, Stafford.

For a list of those licensed to deal in ice, bottled waters and certified railroad waters, the reader is referred to the issues of the monthly *Bulletin* of the State Board of Health.

Following is a condensed tabulation of the analyses completed in the Water and Sewage Laboratory from June 1, 1921, the date of the last annual report, to July 1, 1922:

	Bact.	*Chemical.*	*Miscel.*	*Total.*
June	711	21	3	735
July	721	26	3	750
August	747	16	6	769
September	715	18	6	739
October	637	10	17	664
November	633	6	9	648
December	469	2	16	487
January	789	9	8	806
February	885	20	1	906
March	937	13	16	966
April	951	5	13	969
May	1,125	10	20	1,155
June	1,070	15	21	1,106
	10,390	171	139	10,700

Following is a complete list of the water and sewerage systems of the state, together with diagrams showing the relationship between the population and the various kinds of water supply and sewerage systems:

WATER SUPPLIES.

WATER SUPPLIES IN KANSAS.

	No.	*Population served.*
Ground water supplies	199	470,330
Surface water supplies	54	337,865
Total	253	808,195

WATER SUPPLIES IN CITIES OVER 2,500.

	No.	*Population served.*
Ground water supplies	34	315,058
Surface water supplies	28	302,906
Total	62	617,964

WATER SUPPLIES IN CITIES UNDER 2,500.

	No.	*Population served.*
Ground water supplies	165	155,272
Surface water supplies	26	34,959
Total	191	190,231

SOURCES OF WATER SUPPLY OF THE CITIES AND TOWNS IN KANSAS.

	Population, 1920.	
	Ground water.	*Surface water.*
Abilene	4,895	....
Almena	674	....
Alton	423	....
Altoona	....	1,016
Anthony	2,740	....
Arcadia	1,175	....
Argonia	478	....
Arkansas City	11,253	....
Arma	2,180	....
Ashland	1,147	....
Atchison	....	12,630
Attica	744	....
Atwood	919	....
Augusta	....	4,219
Baldwin	....	1,137
Baxter Springs	3,608	....
Belleville	2,254	....
Belle Plaine	839	....
Beloit	....	3,315
Belpre	488	....
Bennington	371	....
Bird City	489	....
Blue Rapids	1,534	....
Bonner Springs	1,626	....
Bucklin	835	....
Bunkerhill	268	....
Burden	441	....
Burlingame	....	1,330
Burlington	....	2,236
Burns	622	....
Burr Oak	638	....
Burrton	679	....
Caldwell	2,191	....
Canton	700	....
Caney	....	3,427
Cawker City	788	....
Cedar Vale	....	1,044
Chapman	853	....
Chanute	....	10,286
Cheney	636	....
Cherokee	1,091	....
Cherryvale	....	4,698
Chetopa	1,519	....
Cimarron	599	....
Clay Center	3,715	....
Clearwater	647	....
Clifton	631	....
Clyde	1,063	....
Coffeyville	....	13,452
Colby	1,114	....
Coldwater	1,207	....
Colony	....	997
Columbus	3,155	....
Concordia	4,705	....
Conway Springs	1,120	....
Cottonwood Falls	1,044	....
Council Grove	....	2,857
Courtland	401	....
Delphos	870	....
Dighton	503	....
Dodge City	5,061	....
Douglass	....	1,010
Downs	1,508	....
El Dorado	....	10,995
Elgin	600	....
Elk City	....	725
Elkhart	1,160	....
Ellis	1,876	....
Ellinwood	1,103	....
Ellsworth	2,065	....
Emporia	....	11,273
Englewood	466	....
Enterprise	975	....
Erie	....	1,167
Esbon	375	....
Eureka	....	2,606
Everest	403	....
Fort Scott	....	10,693
Florence	1,317	....
Fowler	490	....
Frankfort	1,314	....
Fredonia	....	3,954
Frontenac	3,225	....
Galena	4,712	....
Garden City	3,848	....
Garnett	....	2,329
Gas (from Iola)	....	367
Geuda Springs	266	....
Girard	3,161	....
Glasco	724	....
Glen Elder	615	....
Goodland	2,664	....
Great Bend	4,460	....
Green	297	....
Greenleaf	778	....
Greensburg	1,215	....
Halstead	1,163	....
Hanover	947	....
Harper	1,770	....
Haven	1,301	....

	Population, 1920.	
	Ground water.	*Surface water.*
Havensville	333	....
Hays	3,165	....
Herington	4,065	....
Hiawatha	3,222	....
Highland	809	....
Hill City	732	....
Hoisington	2,395	
Holton	2,703	....
Holyrood	421	....
Hope	589	....
Horton	....	4,009
Howard	....	1,060
Horace	212	....
Hoxie	616	....
Hugoton	644	....
Humboldt	....	2,525
Hutchinson	23,298	....
Independence	....	11,920
Iola	....	8,513
Jamestown	495	....
Jetmore	559	....
Jewell City	....	805
Junction City	7,533	....
Kanopolis	772	....
Kansas City	....	101,177
Kensington	595	....
Kingman	2,407	....
Kinsley	1,986	....
Kiowa	1,539	....
Kirwin	553	....
La Crosse	808	....
La Cygne	1,028	....
La Harpe	....	1,001
Lake of the Forest	Private	....
Lansing (penitentiary)	1,000	....
Larned	3,139	....
Lawrence	....	12,456
Leavenworth	....	16,912
Lebanon	822	....
Lewis	439	....
Liberal	3,613	....
Lincoln	1,613	....
Lindsborg	1,897	....
Little River	749	....
Logan	585	....
Lucas	651	....
Luray	475	....
Lyndon	....	732
Lyons	2,516	....
McCracken	491	....
McCune	591	....
McPherson	4,595	....
Madison	795	....
Macksville	753	....
Manhattan	7,989	....
Mankato	1,326	....
Marion	....	1,928
Marquette	780	....
Marysville	....	3,048

	Population, 1920.	
	Ground water.	*Surface water.*
Meade	838	....
Medicine Lodge	1,305	....
Miltonvale	821	....
Minneapolis	1,842	....
Minneola	493	....
Moline	950	....
Moran	....	676
Mound City	....	720
Moundridge	733	....
Mulberry	2,697	....
Mulvane	1,239	....
Munden	339	....
Natoma	518	....
Neodesha	....	3,943
Newton	9,781	....
Nickerson	1,049	....
Norton	2,186	....
Oakley	768	....
Oberlin	1,247	....
Ogden	596	....
Oil Hill	....	2,000
Olathe	....	3,268
Onaga	838	....
Osage City	....	2,376
Osawatomie	....	4,772
Osborne	....	1,635
Oskaloosa	700	....
Oswego	....	2,386
Ottawa	....	9,018
Oxford	748	....
Paola	....	3,238
Parsons	....	16,028
Peabody	2,455	....
Peru	570	....
Phillipsburg	1,310	....
Pittsburg	18,052	....
Plains	361	....
Plainville	1,004	....
Pleasanton	....	1,291
Portis	390	....
Potwin	415	....
Pratt	5,183	....
Preston	401	....
Pretty Prairie	432	....
Protection	1,109	....
Rosedale (from Kansas City)	....	7,674
Russell	....	1,700
Sabetha	2,003	....
St. Francis	733	....
St. John	1,671	....
St. Marys	1,321	....
Salina	15,085	....
Scammon	1,694	....
Scandia	547	....
Scott City	1,112	....
Sedan	....	1,885
Sedgwick	731	....
Seneca	1,885	....

	Population, 1920.	
	Ground water.	Surface water.
Sharon Springs	815	....
Simpson	295	....
Smith Center	1,567	....
Solomon	1,070	....
Spearville	629	....
Stafford	1,752	....
Sterling	2,060	....
Stockton	1,324	....
Strong City	944	....
Sylvan Grove	450	....
Syracuse	1,059	....
Tipton	230	....
Tonganoxie	971	....
Topeka	50,022	....
Towanda	718	....
Turon	631	....
Udall	381	....
Utica*	285	....
Valley Center	386	....
Valley Falls	1,218	....
Victoria	600	....
Wa Keeney	1,003	....
Wakefield	531	....
Wallace*	300	....
Waldo	246	....
Wamego	1,585	....
Washington	....	1,406
Waterville	665	....
Waverly	619	....
Weir City	1,945	....
Wellington	7,048	....
West Mineral	938	....
Westmoreland	386	....
Wichita	72,217	....
Wilson	1,020	....
Winfield	7,933	....
Yates Center	2,306	....
Totals	470,330	337,865

SEWERAGE.

POPULATION OF KANSAS, CENSUS 1920.

Total population	1,769,257
Urban population, 62 cities over 2,500	617,964
Rural population:	
463 cities under 2,500	290,203
Other rural population	861,090

SEWER SYSTEMS IN KANSAS.

	No.	Population served.
Treated sewage	81	291,770
Untreated sewage	51	418,706
Total	132	710,476

SEWER SYSTEMS IN CITIES OVER 2,500.

	No.	Population served.
Treated sewage	30	196,656
Untreated sewage	27	389,651
Total	57	586,107

SEWER SYSTEMS IN CITIES UNDER 2,500.

	No.	Population served.
Treated sewage	51	95,114
Untreated sewage	24	29,035
Total	75	124,149

SEWER SYSTEMS IN KANSAS WITH METHODS OF DISPOSAL.

	Population, 1920.		
	Treated sewage.	Untreated sewage.	Method of disposal.
Abilene	.....	4,895	Smoky Hill river. Dilution.
Almena	674	.....	Imhoff; sand filter.
Anthony	2,740	.....	Imhoff; contact beds.
Arkansas City	.....	11,253	Arkansas river. Dilution.

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* Permit applied for.

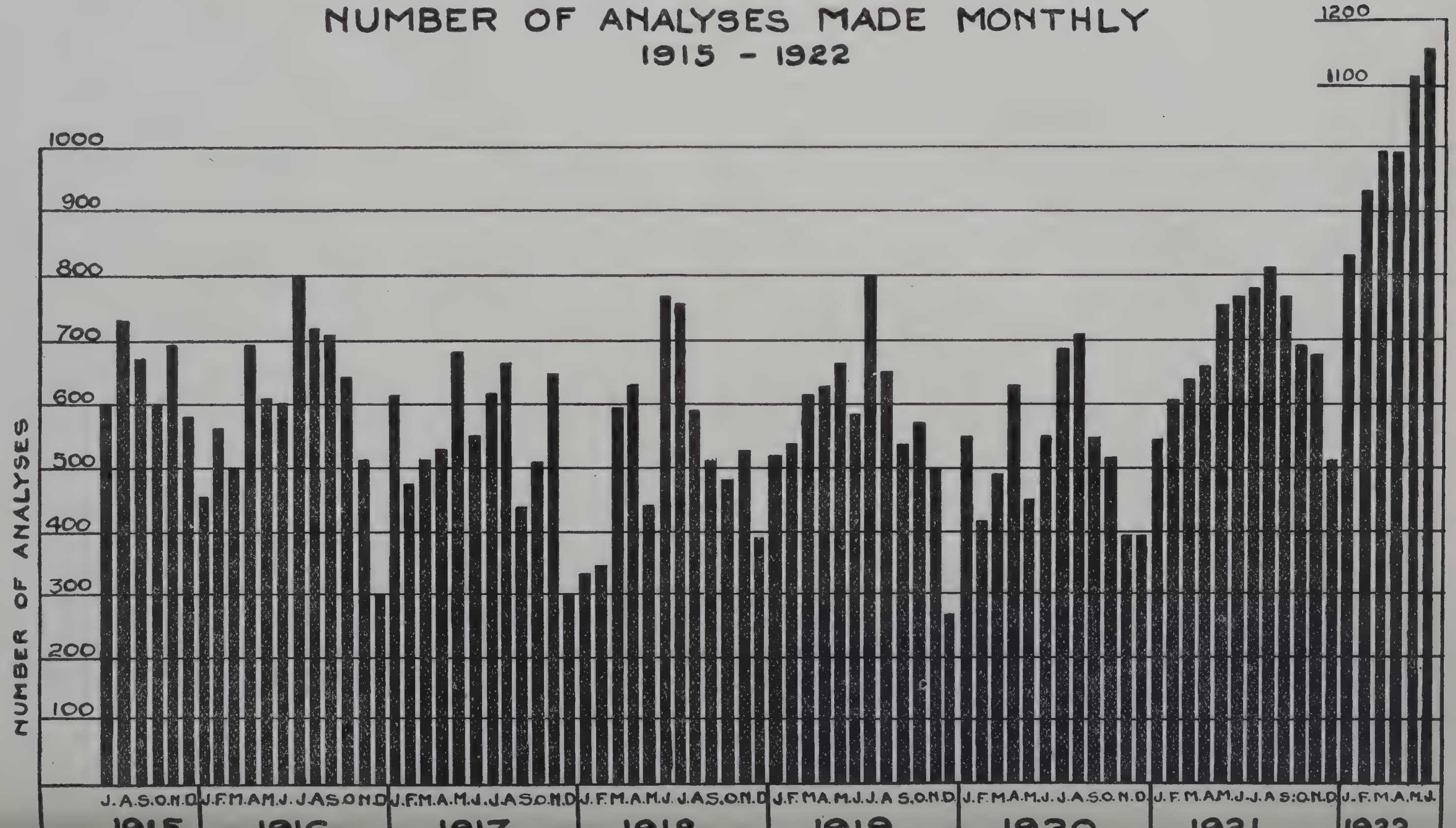
	Population, 1920.		
	Treated sewage.	*Untreated sewage.*	*Method of disposal.*
Army City	.....	.....	Kansas river. Dilution.
Ashland	1,147	.....	Bear creek. Imhoff; sand filter.
Atchison	.....	12,630	Missouri river. Dilution.
Atwood	919	.....	Imhoff; contact beds.
Augusta	4,219	.....	Walnut river. Imhoff; contact beds.
Baldwin	1,137	.....	Marais des Cygnes river. Septic tank; contact beds.
Baxter Springs	.....	3,608	Spring river. Dilution.
Belleville	2,254	.....	Dry creek. Imhoff; sand filter.
Belle Plaine	.....	839	Ninnescah river. Dilution.
Beloit	.....	3,315	Solomon river. Dilution.
Bonner Springs	.....	1,626	Kansas river. Dilution.
Burlingame	1,330	.....	Switzler creek. Imhoff; contact beds.
Burlington	2,236	.....	Neosho river. Septic tank.
Caldwell	2,191	.....	Fall creek. Septic tank.
Caney	.....	3,427	Cana creek. Dilution.
Chanute	10,286	.....	Neosho river. Septic tank.
Chapman	.....	853	Smoky Hill river. Dilution.
Cheney	.....	636	Ninnescah river. Dilution.
Cherryvale	4,698	.....	Drum creek. Septic tank; contact beds.
Chetopa	.....	1,519	Neosho river. Dilution.
Clay Center	.....	3,715	Republican river. Dilution.
Clyde	1,063	.....	Republican river. Septic tank.
Coffeyville	13,452	.....	Verdigris river. Septic tanks.
Colby	1,114	.....	Prairie Dog creek. Imhoff tank; sand filter.
Coldwater	1,207	.....	Cavalry creek. Imhoff tank; sand filter.
Columbus	3,155	.....	Brush creek. Septic tank; contact beds.
Concordia	.....	4,705	Republican river. Dilution.
Cottonwood Falls	1,044	.....	Cottonwood river. Imhoff tank; filter.
Council Grove	2,857	.....	Neosho river. Imhoff; contact beds.
Dodge City	.....	5,061	Akansas river. Dilution.
Douglass	.....	1,010	Walnut river. Dilution.
Downs	1,508	.....	North fork of Solomon river. Septic tank.
El Dorado	10,995	.....	Walnut river. Activated sludge.
Ellinwood	.....	1,103	Arkansas river. Dilution.
Ellis	1,876	.....	Big creek. Septic tank; contact beds.
Elgin	600	.....	Imhoff tank.
Ellsworth	.....	2,065	Smoky Hill river. Dilution.
Emporia	11,273	.....	Neosho river. Imhoff tank; sprinkling filter.
Enterprise	.....	975	Smoky Hill river. Dilution.
Erie	1,167	.....	Fall river. Septic tank.
Eureka	2,606	.....	Fall river. Septic tank.
Fort Riley	.....	.....	Kansas river. Dilution.
Fort Scott	10,693	.....	Marmaton river. Septic tank.
Florence	1,317	.....	Doyle creek. Imhoff tank.
Frankfort	.....	1,314	Black Vermillion river. Dilution.
Fredonia	3,954	.....	Salt creek. Septic tank.
Galena	.....	4,712	Short creek. Dilution.
Garden City	.....	3,848	Arkansas river. Dilution.
Garnett	2,329	.....	Pottawatomie creek. Septic tanks; contact beds.
Geuda Springs	.....	266	Arkansas river. Dilution.
Girard	3,161	.....	Cow creek. Septic tank; contact beds.
Glasco	.....	724	Solomon river. Dilution.
Goodland	2,644	.....	Sappa creek. Imhoff; sand filter.
Great Bend	4,460	.....	Walnut creek. Septic tank.
Halstead	1,163	.....	Little Arkansas river. Septic tank; contact beds.
Hanover	.....	947	Little Blue river. Dilution.

	Population, 1920.		
	Treated sewage.	*Untreated sewage.*	*Method of disposal.*
Harper	1,770	.....	Bluff creek. Septic tank; contact beds.
Hays	3,165	.....	Big creek. Septic tank.
Herington	4,065	.....	Lime creek. Septic tank.
Hiawatha	3,222	.....	Wolf creek. Imhoff; sand filter.
Hoisington	2,395	.....	Cheyenne bottoms. Septic tank.
Holton	2,703	.....	Elk creek. Septic tank; contact beds.
Horton	4,009	.....	Cedar creek. Septic tank; contact beds.
Howard	1,060	.....	Imhoff; sprinkler filter.
Hoxie	616	.....	Imhoff; sand filter.
Humboldt	2,525	.....	Neosho river. Septic tank.
Hutchinson	23,298	.....	Arkansas river. Screens.
Independence	11,920	.....	One-third septic tank, contact beds, Rock creek; two-thirds dilution, Verdigris river.
Iola	8,513	.....	Elm creek. Septic tank.
Junction City	.....	7,533	Smoky Hill river. Dilution.
Kansas City	.....	101,177	Kansas river. Dilution.
Kingman	.....	2,407	Ninnescah river. Dilution.
Kinsley	.....	1,986	Arkansas river. Dilution.
Lake of the Forest	.....	.....	Kansas river. Dilution.
Lansing, Penitentiary	.....	.....	Misouri river. Dilution.
Larned	.....	3,139	Arkansas river. Dilution.
Lawrence	.....	12,456	Kansas river. Dilution.
Leavenworth	.....	16,916	Missouri river. Dilution.
Fort Leavenworth	.....	.....	Missouri river. Dilution.
Liberal	3,613	.....	Dry lake. Septic tank; sand filter.
Lincoln	1,613	.....	Saline river. Septic tank.
Lindsborg	.....	1,897	Smoky Hill river. Dilution.
Lyndon	732	.....	Salt creek. Septic tank; contact beds.
McPherson	4,595	.....	Turkey creek. Septic tank; Imhoff; sand filter.
Manhattan	.....	7,989	Kansas river. Dilution.
Marion	1,928	.....	Cottonwood river. Septic tank.
Marquette	.....	780	Smoky Hill river. Dilution.
Marysville	.....	3,048	Blue river. Dilution.
Minneapolis	.....	1,842	Solomon river. Dilution.
Mulvane	.....	1,239	Arkansas river. Dilution.
Neodesha	3,943	.....	Verdigris river. Imhoff; sprinkler filter.
Newton	9,781	.....	Sand creek. Imhoff; sprinkler filter.
Nickerson	.....	1,049	Arkansas river. Dilution.
Norton	2,186	.....	Prairie Dog creek. Septic tank; contact beds.
Oberlin	1,247	.....	Imhoff tank; sand filter.
Ogden	.....	596	Kansas river. Dilution.
Olathe	.....	3,268	Mill creek. Dilution.
Osage City	2,376	.....	Salt creek. Septic tank; contact beds.
Osawatomie	.....	4,772	Pottawatomie creek. Dilution.
Osborne	1,635	.....	Solomon river. Septic tank.
Oswego	2,386	.....	One-third septic tank, contact beds, Dry creek; two-thirds Neosho river, dilution.
Ottawa	.....	9,018	Marais des Cygnes river. Dilution.
Paola	.....	3,238	Bull creek. Dilution.
Parsons	16,028	.....	Little Labette creek. Septic tank.
Peabody	2,455	.....	Doyle creek. Septic tank.
Pittsburg	.....	18,052	Cow creek. Dilution.
Plainville	1,004	.....	Imhoff tank; sand filter.
Potwin	415	.....	Walnut river. Imhoff; sand filter.
Pratt	5,183	.....	Ninnescah river. Septic tank.
Protection	1,109	.....	East creek. Screens; sand filter.
Rosedale	7,674	.....	Turkey creek. Dilution.
Sabetha	2,003	.....	Cedar creek. Septic tank; contact beds.

	Population, 1920.		
	Treated sewage.	*Untreated sewage.*	*Method of disposal.*
St. John	1,671	.....	Rattlesnake creek. Septic tank.
Salina	15,085	.....	———.
Sedan	1,885	.....	Cana river. Imhoff tank; sand filter.
Scott City	1,112	.....	Dry run. Imhoff tank; sand filter.
Sedgwick	731	.....	Little Arkansas river. Imhoff; sand filter.
Seneca	1,885	.....	Nemaha river. Septic tank; contact beds.
Sharon Springs	815	.....	Imhoff tank; sand filter.
Smith Center	1,567	.....	Dry run. Imhoff tank; sand filter.
Stafford	1,752	.....	Ninnescah river. Septic tank; contact beds.
Stockton	1,324	.....	Septic tank.
Syracuse	.....	1,059	Arkansas river. Dilution.
Topeka	.....	50,022	Kansas river. Dilution.
Towanda	.....	718	White Water creek. Dilution.
Valley Falls	1,218	.....	Delaware river. Imhoff tank.
Wa Keeney	1,003	.....	Imhoff tank; sand filter.
Wamego	.....	1,585	Kansas river. Dilution.
Washington	1,406	.....	Mill creek. Septic tank.
Wellington	7,048	.....	Slate creek. Septic tank.
Wichita	.....	72,217	Arkansas river. Dilution.
Winfield	.....	7,983	Walnut river. Dilution.
Yates Center	2,306	.....	Owl creek. Septic tank; contact beds.
Total	291,770	419,439	

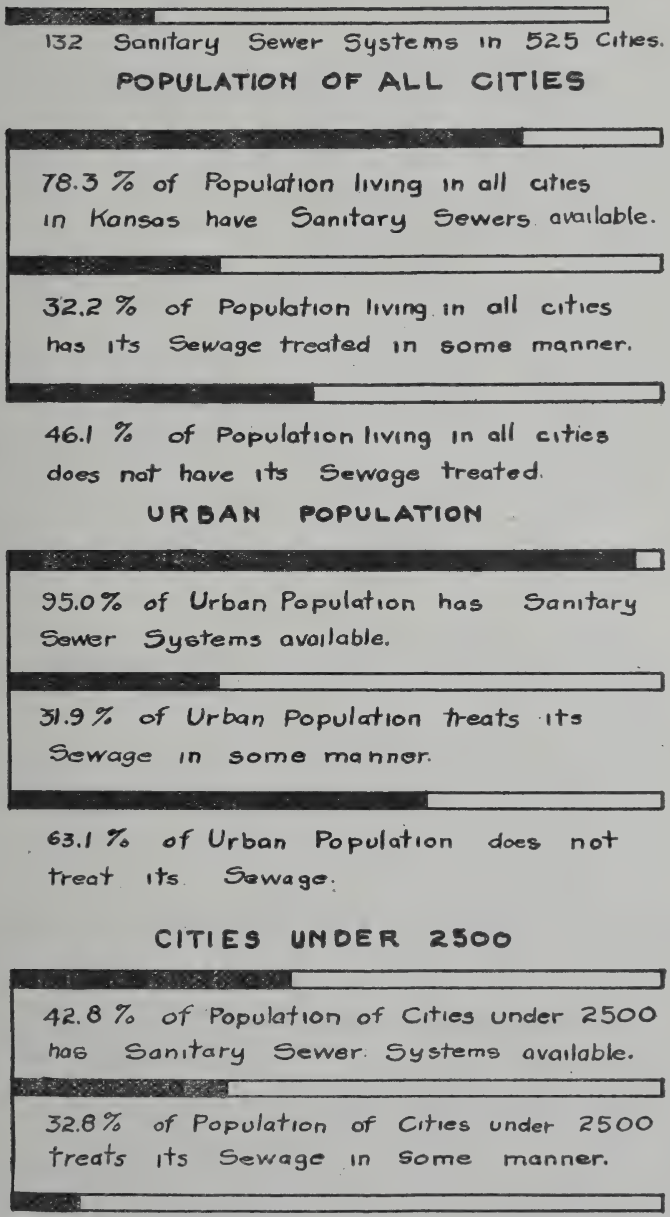
KANSAS STATE BOARD OF HEALTH
DIVISION OF WATER & SEWAGE

CHART SHOWING
NUMBER OF ANALYSES MADE MONTHLY
1915 - 1922



KANSAS STATE BOARD OF HEALTH
DIVISION OF WATER AND SEWAGE

SANITARY SEWERS IN KANSAS
1921-2



132 Sanitary Sewer Systems in 525 Cities.

POPULATION OF ALL CITIES

78.3 % of Population living in all cities in Kansas have Sanitary Sewers available.

32.2 % of Population living in all cities has its Sewage treated in some manner.

46.1 % of Population living in all cities does not have its Sewage treated.

URBAN POPULATION

95.0 % of Urban Population has Sanitary Sewer Systems available.

31.9 % of Urban Population treats its Sewage in some manner.

63.1 % of Urban Population does not treat its Sewage.

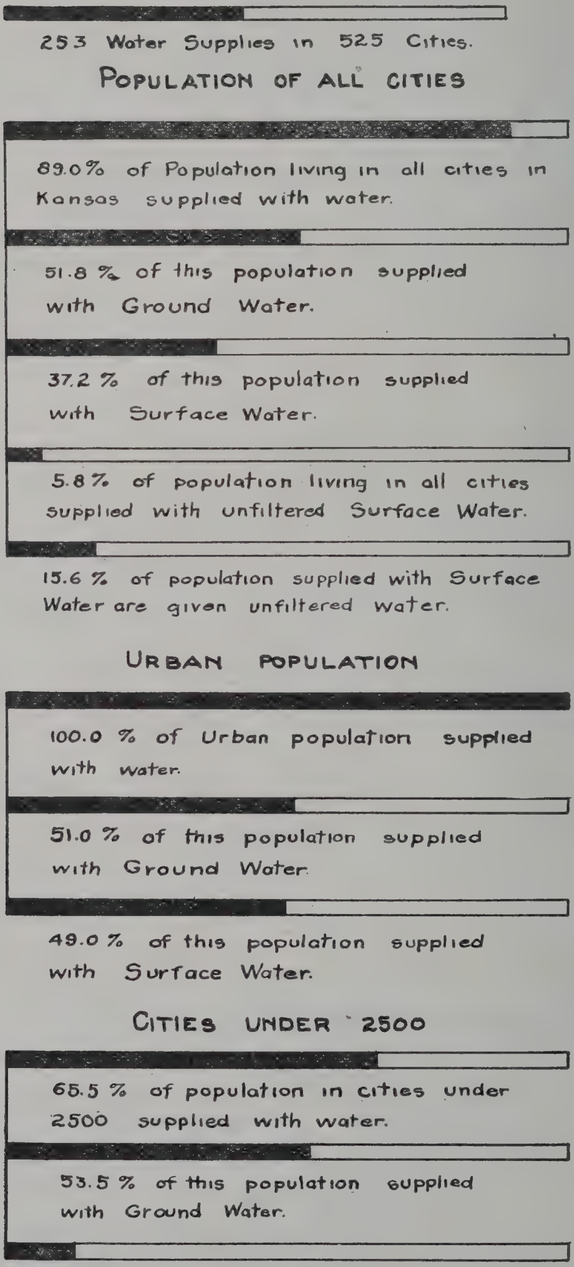
CITIES UNDER 2500

42.8 % of Population of Cities under 2500 has Sanitary Sewer Systems available.

32.8 % of Population of Cities under 2500 treats its Sewage in some manner.

10.0 % of Population of Cities under 2500 does not treat its Sewage.

KANSAS STATE BOARD OF HEALTH.
DIVISION OF WATER AND SEWAGE.
WATER SUPPLIES IN KANSAS.
1921-2



253 Water Supplies in 525 Cities.

POPULATION OF ALL CITIES

89.0% of Population living in all cities in Kansas supplied with water.

51.8 % of this population supplied with Ground Water.

37.2 % of this population supplied with Surface Water.

5.8 % of population living in all cities supplied with unfiltered Surface Water.

15.6 % of population supplied with Surface Water are given unfiltered water.

URBAN POPULATION

100.0 % of Urban population supplied with water.

51.0 % of this population supplied with Ground Water.

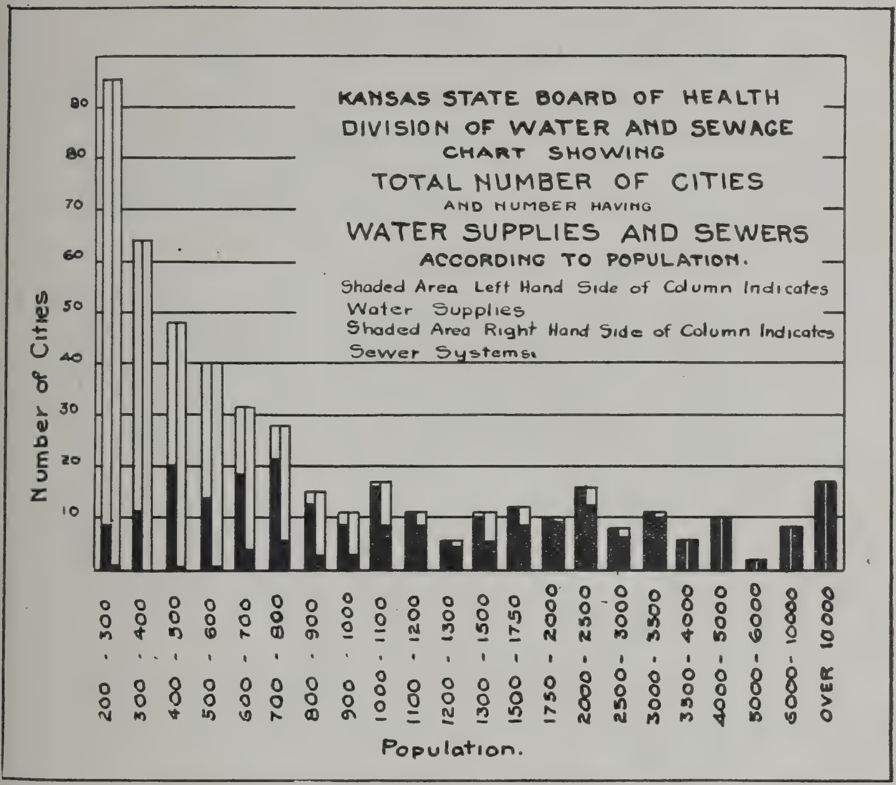
49.0 % of this population supplied with Surface Water.

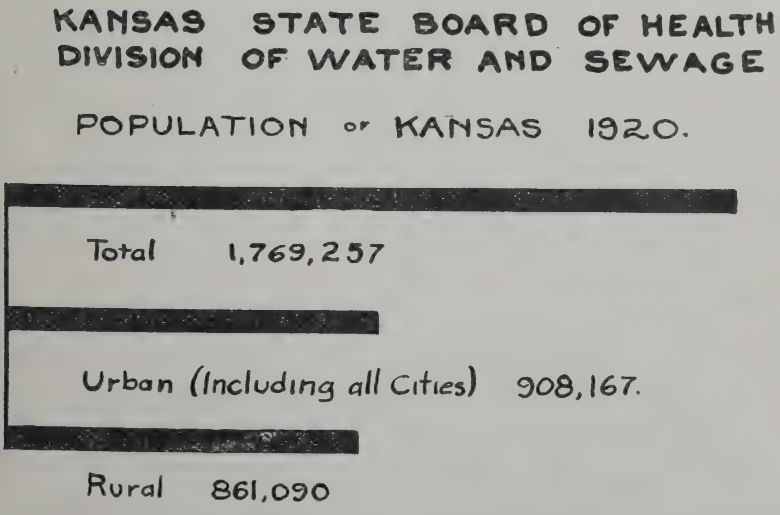
CITIES UNDER 2500

65.5 % of population in cities under 2500 supplied with water.

53.5 % of this population supplied with Ground Water.

12.0 % of this population supplied with Surface Water.


KANSAS STATE BOARD OF HEALTH
DIVISION OF WATER AND SEWAGE
CHART SHOWING
TOTAL NUMBER OF CITIES
AND NUMBER HAVING
WATER SUPPLIES AND SEWERS
ACCORDING TO POPULATION.
Shaded Area Left Hand Side of Column Indicates Water Supplies
Shaded Area Right Hand Side of Column Indicates Sewer Systems.
Number of Cities
90
80
70
60
50
40
30
20
10
200 - 300
300 - 400
400 - 500
500 - 600
600 - 700
700 - 800
800 - 900
900 - 1000
1000 - 1100
1100 - 1200
1200 - 1300
1300 - 1500
1500 - 1750
1750 - 2000
2000 - 2500
2500 - 3000
3000 - 3500
3500 - 4000
4000 - 5000
5000 - 6000
6000 - 10000
OVER 10000
Population.


KANSAS STATE BOARD OF HEALTH
DIVISION OF WATER AND SEWAGE
POPULATION OF KANSAS 1920.
Total 1,769,257
Urban (Including all Cities) 908,167.
Rural 861,090

DIVISION OF VENEREAL DISEASES.

Report for Year Ending June 30, 1921.

During the fiscal year 1920-'21 the Division of Venereal Diseases has been able to develop along all three lines of activities, viz., treatment, repression and education.

TREATMENT.

In addition to the six clinics in operation a year ago, all of which have continued during the present year, two additional clinics have been established—one at Florence in October, 1920, and one at Junction City, in November, 1920. The attendance at the clinics has increased 95 per cent over the previous year, 1,216 men and 1,023 women having entered the clinics as new patients during the past year. The following table shows the attendance at the different clinics:

TABLE No. 1.—Admissions to venereal-disease clinics, by months, 1920-1921.

CITIES.	June.				July.				August.				September.				October.				November.				December.			
	Gon.		Syph.		Gon.		Syph.		Gon.		Syph.		Gon.		Syph.		Gon.		Syph.		Gon.		Syph.		Gon.		Syph.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Topeka	7	7	1	2	4	10	4	2	4	5	0	1	4	11	0	0	5	6	3	0	1	2	0	1	1	1	1	0
El Dorado	5	9	10	2	6	6	5	10	10	5	6	7	5	3	6	6	5	8	8	7	7	6	7	6	7	5	9	6
Kansas City	1	0	1	1	0	0	5	2	3	0	5	2	2	0	6	0	5	3	4	2	1	0	2	1	2	0	1	0
Wichita	11	9	14	4	7	7	8	4	6	13	8	7	2	25	3	4	11	14	8	7	16	8	8	3	5	10	8	6
Lawrence	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	3	0	1	0	0	0
Rosedale	6	1	18	20	5	1	50	25	5	2	45	20	9	0	25	17	5	2	53	24	3	0	42	12	0	0	21	15
Florence	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	4	0	1	0	4	1	1	0
Junction City	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Lansing	11	22	6	14	13	38	5	9	14	20	7	4	23	35	14	6	15	41	5	14	14	29	5	12	11	12	9	9
Totals	41	48	51	44	35	62	77	52	42	45	71	41	45	74	54	33	48	75	83	54	47	46	68	35	31	29	50	36

Gon., gonorrhœa. Syph., syphilis. M, male. F, female.

TABLE No.1—CONCLUDED.

CITIES.	January.				February.				March.				April.				May.				Totals.			
	Gon.		Syph.		Gon.		Syph.		Gon.		Syph.		Gon.		Syph.		Gon.		Syph.		Gon.		Syph.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Topeka	4	1	0	1	3	1	3	3	8	3	4	1	3	1	7	5	2	2	0	0	46	50	23	16
El Dorado	10	8	7	5	5	7	6	5	7	8	8	6	6	8	6	5	8	9	10	6	81	82	88	71
Kansas City	3	0	2	0	0	0	4	0	2	0	3	1	2	0	9	1	2	1	4	2	23	4	46	12
Wichita	13	21	11	5	5	12	5	4	6	16	10	8	3	6	5	4	1	2	3	4	86	143	91	60
Lawrence	1	0	2	0	0	0	1	0	0	0	1	0	0	0	0	1	0	0	1	0	4	0	10	2
Rosedale	4	0	51	26	2	0	20	7	5	0	26	12	3	0	21	9	7	0	23	6	54	6	395	19
Florence	0	0	0	0	3	1	0	0	1	0	0	0	2	0	1	0	0	0	1	0	15	3	5	0
Junction City	0	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1	3	1	1
Lansing	11	11	10	12	4	6	10	12	7	16	10	9	5	18	16	17	7	2	8	9	135	250	105	127
Totals	46	42	83	49	22	27	49	31	37	44	63	37	24	33	65	42	27	16	50	28	445	541	764	482

Gon., gonorrhœa. Syph., syphilis. M, male. F, female.

The total cases of venereal disease reported to the State Board of Health during the year were as follows:

	Male.	*Female.*
Gonorrhœa	1,145	762
Syphilis	818	456
Chancroid	26	....
Totals	1,989	1,218

While there has been a slight increase in the number of physicians reporting diseases, yet the percentage of total physicians in the state remains very small. In checking with the Wassermann laboratory we find many physicians receiving positive diagnosis from the laboratory who fail to report any cases of venereal disease.

The division has purchased $4,200 worth of arsphenamine for use in the clinics and to physicians for the treatment of indigent patients. The State Board of Administration has continued to make available for quarantine purposes the Industrial Farm for Women and the State Quarantine Camp for men. The following tabulation shows the number of cases quarantined, by months, in these institutions from June 1, 1920, to June 1, 1921.

QUARANTINE PATIENTS.

	June.	*July.*	*Aug.*	*Sept.*	*Oct.*	*Nov.*	
Male	10	13	23	15	15	13	
Female	17	32	32	15	35	26	
	Dec.	*Jan.*	*Feb.*	*Mar.*	*April.*	*May.*	*Total.*
Male	10	22	15	20	21	8	185
Female	11	27	17	21	29	18	280

REPRESSIVE MEASURES.

The division has had the services of a social investigator during the entire year. She has coöperated with the city department of health and the welfare workers in the city, has assisted the physicians in the various clinics over the state, and has given some assistance to Mrs. Perry at the Industrial Farm for Women. Her report, herewith attached, shows 221 investigations made; 120 examinations given; 26 girls sent to the Industrial Farm, as the result of such investigations and examinations; 7 girls sent to the Crittenden Home; 1 to the State Hospital; 1 sent to St. Francis Hospital; and 19 cases were handled by the juvenile court. It is to be regretted that owing to decreased appropriation for the next two years we are forced to discontinue the services of this investigator.

EDUCATION.

The educational work has consisted of a lecture given to high-school pupils by special workers secured for this purpose. In July and August a letter was mailed to the superintendents of 535 high schools in Kansas explaining our plan of presenting social hygiene to the high-school boys and girls by special lecturers secured for that purpose, and advising that the work was available for their pupils. In response to these letters requests were received from 97 schools for the work for girls and from 160 schools for the work for boys. Two former Y. M. C. A. secretaries were secured to present this work to the boys; and Miss Lo Ree Cave, of the department of home economics, Hays Normal School, Hays, Kan., and Mrs. Buena Burr, who has had considerable experience in girls' work, were secured to present the work to the girls. The president of the Hays Normal School showed a fine spirit of coöperation by loaning Miss Cave to us, and we paid the salary of the substitute for her work at Hays.

In addition to the lecture, two sets of charts were used in presenting the work. These charts were prepared by the United States Public Health Service and were entitled "Keeping Fit" and "Youth and Life." The pamphlets "Keeping Fit" and "The Girl's Part" were distributed to all high-school pupils where the work was presented.

During the period October 1 to May 15, lectures were delivered to 10,602 boys in 225 high schools, at a per capita cost of 19½ cents; and to 16,392 girls in 152 schools, at a per capita cost of 12½ cents. It was thought advisable, wherever train service would permit, to hold conferences with the women of the community, and thus 3,363 women were reached by this educational measure.

On the whole the work has proved profitable and has received very favorable comment from many of the leading educators of the state.

The chief of the division has delivered 33 lectures, 27 of which were in connection with film showings. The average attendance was 175.

Report for Year Ending June 30, 1922.

Owing to a reduction in the budget of this division for the fiscal year 1921-'22, the activities of the division have been lessened somewhat over the previous year, practically all the activities for the year being done along educational and treatment lines.

Beginning with July 1, 1921, the division discontinued all aid to clinics with the exception of supplying them with arsphenamine or neoarsphenamine free of charge. We are pleased to note that all clinics with the exception of the one located at Florence have continued to function throughout the year, the local officials or health departments arranging to meet the added expenditure made necessary by the withdrawal of state funds.

On March 1, 1922, Bethany Hospital, Kansas City, Kan., opened a general out-patient department, including venereal disease, which we are assisting by supplying arsphenamine. The following tabulation shows the number of new admissions to clinics, by months, from June 1, 1921, to May 31, 1922:

TABLE No. 1.—Admissions to the venereal disease clinics, b months, 1921-1922.

CLINIC.		June.		July.		Aug.		Sept.		Oct.		Nov.		Dec.		Jan.		Feb.		Mar.		Apr.		May.		Totals.	
		F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.
Wichita	G.	19	3	2	0	4	0	5	0	6	0	18	0	11	0	19	0	14	5	5	0	2	1	13	0	118	9
do	S.	3	8	1	7	3	2	6	1	5	4	8	5	8	4	18	9	7	11	2	8	3	5	7	8	71	72
Topeka	G.	5	4	2	1	3	4	4	2	4	2	3	3	1	1	0	6	0	2	1	3	1	1	2	2	26	31
do	S.	0	4	3	2	1	2	1	2	1	3	1	1	2	3	5	7	5	4	2	2	1	4	0	1	22	35
Rosedale	G.	2	4	1	8	0	5	1	7	1	11	2	9	1	8	0	9	1	12	1	8	0	7	2	9	12	97
do	S.	17	39	34	39	22	28	18	33	23	24	10	23	9	21	10	29	14	32	14	26	8	19	6	17	185	330
Kansas City	G.	1	1	4	10	0	0	2	3	0	0	0	1	1	1	0	0	0	1	1	1	1	4	1	2	11	24
do	S.	3	3	1	6	0	0	2	1	0	0	0	6	2	4	0	2	1	3	1	2	0	3	2	4	12	34
El Dorado	G.	6	5	8	0	5	6	10	9	12	5	12	5	9	7	10	9	10	9	9	5	11	8	4	5	106	73
do	S.	2	6	1	5	2	5	4	5	3	7	3	7	4	4	4	3	4	3	3	2	3	6	3	5	36	58
Lawrence	G.	0	4	0	0	1	0	0	0	0	1	2	0	0	0	0	1	2	1	0	0	0	0	0	1	5	8
do	S.	0	0	1	1	1	0	1	0	0	0	1	0	0	0	1	2	1	0	0	0	0	0	2	1	8	4
Lansing	G.	32	14	23	14	14	7	13	0	11	4	18	2	5	3	16	1	10	2	12	1	14	1	7	0	175	49
do	S.	10	7	9	12	12	6	8	0	9	14	8	8	7	20	14	10	10	8	20	8	11	6	11	14	129	113
Junction City	G.	8	1	1	1	1	1	0	0	0	0	1	0	0	0	0	1	0	0	0	2	0	0	0	0	11	6
do	S.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Bethany hospital	G.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	1
do	S.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	5	1	5	4	1	10	11
Totals	G.	73	36	41	34	28	23	35	21	34	23	56	20	28	20	45	27	37	32	30	21	29	22	29	19	465	298
	S.	35	67	50	72	41	43	40	42	41	52	31	50	32	56	52	62	42	61	47	53	27	48	35	52	473	658

G, gonorrhœa. S, syphilis. M, male. F, female.

TABLE No. 2.—Venereal-disease cases treated in clinics during the biennium 1920-1922.

		Gonorrhœa.		Syphilis.		Totals.			
						Gonorrhœa.		Syphilis.	
		M.	F.	M.	F.	M.	F.	M.	F.
Wichita	1920–1921	86	143	91	60	95	261	167	131
do	1921–1922	9	118	72	71				
Topeka	1920–1921	46	50	23	16	77	76	58	38
do	1921–1922	31	26	35	22				
Rosedale	1920–1921	54	6	395	193	151	18	725	378
do	1921–1922	97	12	330	185				
Kansas City	1920–1921	23	4	46	12	47	15	80	24
do	1921–1922	24	11	34	12				
El Dorado	1920–1921	81	82	88	71	154	188	146	107
do	1921–1922	73	106	58	36				
Lawrence	1920–1921	4	0	10	2	8	5	14	10
do	1921–1922	8	5	4	8				
Junction City	1920–1921	1	3	1	1	7	14	2	1
do	1921–1922	6	11	1	0				
Lansing	1920–1921	135	250	105	127	184	425	218	256
do	1921–1922	49	175	113	129				
Totals	1920–1921	430	538	759	482	727	1,002	1,406	945
	1921–1922	297	464	647	463				
Grand totals		727	1,002	1,406	945	1,729		2,351	

TABLE No. 3.—Venereal-disease reports by months, June 1, 1921, to June 1, 1922.

	Gonorrhœa.		Syphilis.		Total.	
	Male.	Female.	Male.	Female.	Male.	Female.
1921—June	35	65	70	35	100	105
July	116	35	58	50	151	108
August	115	36	69	32	151	101
September	114	29	74	29	143	103
October	65	26	83	51	91	134
November	87	37	72	37	124	109
December	79	26	76	38	105	114
1922—January	99	44	77	58	143	135
February	76	13	52	21	89	73
March	78	9	62	34	87	96
April	101	39	71	39	140	110
May	83	39	75	40	122	115
1921–1922	1,048	398	839	464	1,446	1,303
1920–1921	1,145	762	818	456	1,969	1,218

Table II shows comparisons in admissions for the two years. It will be noted that there was a slight decrease in new admissions during the year 1921-'22 from the number admitted during the previous year, both in gonorrhœal and syphilitic cases. In one or two clinics this is undoubtedly due to withdrawal of state funds from the support of clinics. The reduction in male cases at Lansing is due to the discontinuance in August, 1921, of the Men's Quarantine Camp at Lansing by the State Board of Administration.

There has been a small decrease in the number of cases of gonorrhœa, and a slight increase in the cases of syphilis reported.

Table III shows reports received, by months, at the State Board of Health. Approximately $1,750 have been expended for arsphenamine and neoarsphenamine for distribution to clinics and for indigent cases during the past year.

Not having sufficient funds to hire a full-time investigator, very little has been done in repressive measures except through local health officers. Nearly all communities having a full-time health officer have coöperated very well in following up and quarantining known sources of infection; those with part-time organizations are not nearly so active.

The educational work this year has been mostly a continuation of the work started in high schools the year previous, using the "Keeping Fit" charts for the work with boys and the "Youth and Health" charts for the girls. The work for boys has been in charge of Mr. C. A. Hall, who presented it in 111 high schools to a total of 6,500 boys. Mrs. Walter Burr has had charge of the girls' work, and has reached 9,192 girls in 152 high schools. In addition to the work with girls, wherever practicable Mrs. Burr has met the mothers of the community following her appearance in the high school. She has appeared before 61 groups reaching a total of 3,056 with her message.

During the year the chief of the division has appeared before 44 audiences, either with a lecture or lecture and film, and has thus carried a venereal-disease message to 10,468 persons. There has been received during the year 914 requests for literature, in response to which there were mailed 8,560 pamphlets. In addition there have been distributed by lecturers, clinics, etc., 26,387 pieces, making a total of 34,947 pamphlets during the year by this division.

In coöperation with the United States Public Health Service there was held a Lay Woman's conference on Social Hygiene at Kansas City, Kan., on April 11 and 12, 1922. More than 150 women enrolled at this conference, and as a result a study group on social hygiene was organized. Every one present seemed much interested and felt the conference to be well worth while.

A set of twenty wax moulages was rented from the American Social Hygiene Association and used for exhibit purposes during the State Medical Society May 3 and 4, at Topeka. The exhibit was examined by a large number of physicians attending, and all seemed appreciative and pleased with the exhibit.

Respectfully submitted,

B. K. Kilbourne,
Chief, Division of Venereal Diseases.

DIVISION OF FOOD AND DRUGS.

Report for Year Ending June 30, 1921.

As usual, the fiscal year began with intensive egg work, though perhaps a little less so than the year before. The plan of work was similar to the previous year, the inspectors being assigned certain towns in which there were centralizing agencies. We did some coöperative work with the United States Bureau of Chemistry in Wichita, which seems to be the largest interstate point in the state. This work was principally on shipments of eggs from Oklahoma and a few scattering ones from Texas. As a result of this work more than forty citations were made of violations of the federal food and drugs act; that is, for shipping, interstate, eggs which were unfit for food.

The next work of special interest was an investigation of the observance of the bread-weight law. This investigation was conducted principally in Kansas City, for the reason that Missouri bakers were delivering into Kansas large quantities of bread. A survey showed that there was considerable variation in the weight of loaves of the same price, and also that there was not much effort to clearly label those loaves which were not of the exempted weight. Several of the Kansas City, Mo., bakers were cited to hearings before the chief of the Kansas City station of the Bureau of Chemistry for shipping, interstate, food in uniform packages on which a correct statement of weight was not made. After the hearings the evidence was forwarded to the Washington office of the Bureau of Chemistry with proper recommendations. We are now waiting final decision in the cases. As a further result of our efforts in Kansas City, bakers of both states are observing the state and federal laws.

There is a regulation by the State Board of Health which requires that all loaves of bread be wrapped before they leave the bakeshop. Investigations have proved that this was being almost universally observed as it applied to loaves of bread that were sold to the consumer—that is, to the housewife—but that bakers were not all wrapping the bread which went to restaurants, hotels and such other eating places. The Kansas City bakers were more directly affected by the application of the bread-wrapping ruling to restaurant and hotel bread than perhaps any other group in the state, on account of the magnitude of the hotel trade. They appealed to the Board of Health at a meeting in Lawrence to have some modification of the ruling as it concerned that type of bread. The president of the Board appointed a committee composed of Doctor Axtell, Doctor Walker and Doctor Coburn to investigate the situation and report at the next meeting of the Board. This committee, with the aid of inspectors from this department, made an investigation of the situation and reported to the Board that in their opinion the necessity for wrapping restaurant and hotel bread was just as great as that of bread purchased by the housewife, but that the wrapping of the loaves *en masse* would answer the purpose of the regulation. Bakers were therefore notified that the bread-wrapping regulation should apply to all bread loaves, whether they were to go to the housewife, restaurant, hotel or other place, but that bread which went to hotels and restaurants, and which was not resold by the loaf, could be wrapped in quantities and delivered in that manner. The bakers at their next meeting following this decision agreed to comply with the regulation in every way.

An ice-cream survey was conducted during August and September to determine the quality of the ice cream sold on the Kansas market. Almost all the manufacturers were visited and samples collected. The survey showed that the average butter-fat content of the ice cream sold in the state was between 11 and 12 per cent. Following this survey, the Association of Ice Cream Manufacturers asked for a hearing at a Board meeting, which was granted. At that meeting they asked the State Board of Health to favor a law which would reduce the butter-fat standard for ice cream in this state to 10 per cent. The manufacturers presented no reasons why the Board should go on record favoring a lower standard; therefore the president of the Board suggested that a committee composed of H. M. Jones, state dairy commissioner; Mr. Manley, representative of the manufacturers, and F. E. Rowland, of the State Board of Health, carefully investigate the situation and bring before the Board at their next meeting a bill which in the committee's opinion should be satisfactory to the manufacturers, the dairy department, and the State Board of Health. This committee met several times and drew up a standard, agreeing on all points except the butter-fat standard. Mr. Manley asked for time to take that matter up with the manufacturers' association. After consulting them he announced that they would prefer to go before the legislature with this department's opposition than to accede to more than a 10 per cent fat standard. Using the greater part of the bill which was formulated by this committee, the manufacturers added the butter-fat per cent of 10 and presented it for passage. It passed both houses and was signed by the governor, and is now a law. The new standard differs from the old in that the butter-fat was reduced from 14 to 10 per cent and Pasteurization, milk-solids and weight requirements were added. The dairy commissioner is charged with the enforcement of the law.

Another bit of legislation which concerned this department—in fact, which originated in it—was that of an egg-candling bill. This was designed to practically make a law of the regulation which we now operate under, adding a few other features which would protect the seller as well as the buyer. This bill was killed in the house.

Our special work the latter half of the year has been confined quite largely to an investigation of jams and jellies sold in Kansas, a milk survey in some of the southeastern towns, and a survey of the gelatine and ice-cream situation.

There has evidently been more sophistication in jams and jellies than in any other food products that we have observed recently. This is probably in greater part due to the then high price of sugar and fruit. Many of the so-called jams on the market contain little of the fruit named, and are gelatinous mixtures composed of either corn syrup or sugar, or both, with apple pectin added to give them the consistency of jam. We are not yet through with our investigation of these products. We expect to have the situation well in hand and only properly branded jams and jellies coming into this state by fall.

A milk survey was conducted in Parsons, Pittsburg, Chanute, Baxter Springs, Independence, Columbus, Coffeyville and Galena, during May, and is not entirely finished so we are not able at this time to arrive at definite conclusions. We were able to secure bacteriologists from the University by paying their traveling and living expenses, to assist in this work. They took with them to each town suitable laboratory equipment for making bacteriological examinations and sediment tests as the samples were brought in by the inspectors. After these determinations were made, samples were taken for chemical test and forwarded to the laboratories at Manhattan and Lawrence. This survey, I believe, was the most complete work that has been done in the state on milk for some time, as it not only included bacteriological and chemical examination of the product, but the physical examination of the dairies by Mr. Gould, of the State Dairy Department. Unfortunately, the dairy commissioner's office was quite busy at that time on account of cream-testing examinations and could not inspect the dairies of all the towns.

We have now under investigation gelatines, vegetable gums and other substances (sometimes called stabilizers) which are used in the manufacture of ice cream. Samples have been collected in all the leading ice-cream factories in the state, and samples are being examined at the Manhattan laboratory both chemically and bacteriologically. Federal reports show that some of the ice-cream powders on the market are high in heavy metals and are therefore injurious to the health of the consumer. We will not be able to report on this investigation at this time.

The routine work of this division during the last fiscal year includes 9,810 sanitary inspections. The following table summarizes that work:

SUMMARY OF INSPECTIONS, 1920.

ESTABLISHMENTS.	Total.	Good.	Good to fair.	Fair.	Poor.	Special.
Bakeries	799	158	261	121	4	255
Bottling works	32	4	7	12	0	9
Confectioneries	452	189	153	58	8	44
County and city offices	185	0	0	0	0	185
Drug stores	1,201	493	448	213	1	46
Groceries	3,339	1,285	1,292	664	28	70
Groceries and meat markets	1,030	349	430	226	13	12
Butter, cheese, ice cream and other food factories	36	10	13	5	0	8
Meat markets	633	229	245	116	7	36
Special egg work and produce houses	773	16	22	42	1	692
Slaughter houses and packing houses	52	14	19	8	4	7
Special sampling	897	0	0	0	0	897
Soda fountains	169	30	53	46	0	40
Stands at fairs, lunch and drink	322	0	0	0	0	322
Weight investigations	75	0	0	0	0	75
Totals	9,995	2,777	2,943	1,511	66	2,698

In making these inspections 540 towns in 105 counties were visited and 185 calls made on county and city officials, and 951 revisits were made to the 540 towns.

Our reports show the following work on grocers' and druggists' scales, weights and measures. Scales inspected, 7,902; weights inspected, 5,057; measures inspected, 69. Of which 35 scales, 401 weights and 6 measures were condemned.

Last year we procured additional equipment for testing grocers' and druggists' scales and are able to report a larger volume of work for the fiscal year just closing.

Our laboratories report the analysis of a large number of samples. The report of laboratories will be made by their directors.

It may be well to state here that the department made a very strenuous effort to secure an appropriation from the legislature which would provide for the purchase of an automobile, heavy test weights, and gasoline- and oil-measure testing devices, so that one of our inspectors could be assigned for a certain period of time each year to the operation of the car in his territory. Without an automobile it is practically impossible to do effective work, and it is also very expensive, as it necessitates paying transportation on the weights from town to town and drayage from the station to the scales, and from scale to scale, and back to the depot. We felt somewhat optimistic over our chances of obtaining this appropriation, but soon found we had no chance when it was learned that the proposed consolidation bill was designed to take over the weight-and-measure work of this department. The consolidation bill, as you know, did not get out of the senate committee, so the weight-and-measure work is just where it was a year ago.

Though the law does not provide for the condemnation or confiscation of foods or drugs, our inspectors have pronounced as unfit for food or for use as medicine approximately 10,978 pounds of foodstuffs and 1,198 pounds of drug products. Dealers who had in their possession the unfit articles in every instance were willing to destroy same in the presence of the inspector or denature it and hold it for credit, or denature it in such a way that it could be used for animal food. The articles condemned are classified in the appended list:

FOODS AND DRUGS CONDEMNED, JUNE 1, 1920, to JUNE 1, 1921.

FOODS.

ARTICLES.	Amount.	ARTICLES.	Amount.
Rice lbs.	305	Pancake flour lbs.	784
Cracked wheat lbs.	5	Cornmeal lbs.	121
Oleomargarine lbs.	60	Prepared mustard lbs.	42
Baking powder lbs.	5	Hops lbs.	2
Cracked wheat lbs.	5	Preserves, jellies, jams lbs.	985
Cracked hominy lbs.	40	Fresh meat and fish lbs.	196½
Vinegar gals.	46½	Raw milk qts.	22
Kaklo pkgs.	10	Chili loaf lbs.	25
Evaporated milk cans	43	Egg preserver doz.	6
Ripe olives lbs.	116	Pickles pts.	223
Candy lbs.	3,113	Gum lbs.	104
Nut meats lbs.	218	Crackers and cracker meal lbs.	469
Yeast foam lbs.	14	Peanut butter lbs.	110
Peanuts lbs.	70	Cocoanut lbs.	6
Sorghum lbs.	8	Prepared cereals lbs.	1,325
Canned salmon lbs.	87	Canned vegetables lbs.	363½
Canned fruit lbs.	178	Cookies lbs.	137
Excello cake lbs.	50	Syrup lbs.	175
Black pepper lbs.	1	Evaporated fruit, plus 20 lbs., lbs.	528
Alimentary paste lbs.	160	Flour lbs.	90
Sugar lbs.	285	Pie filler pkgs.	2

DRUGS.

Flavoring extracts gals.	9¼	Nitre, sweet spirits oz.	8
Iodide, iron lbs.	2½	Tincture of aconite root lbs.	1
Nux vomica lbs.	1	Hydrocyanic acid lbs.	1½
Miscel. patent medicines bots.	36	Proprietary pills, miscel pkgs.	42
Ginso's "B-D" gals.	4	Seidlitz powders doz.	2
Beverages gals.	135	Pinkham's Compound doz.	¼

During the year 149 prosecutions for violations of laws, the enforcement of which this department is charged, were terminated, the fines totaling $1,846. There were 32 prosecutions for violation of the food and drug sanitary law, 19 for violation of the weights and measures law, and 98 for violation of the food and drugs law. They are classified in the following table:

PROSECUTIONS FOR VIOLATION OF FOOD AND DRUGS LAW, JUNE 1, 1920, TO JUNE 1, 1921.

Food and Drug Law.	
Sale of dirty milk	5
Sale of watered milk	1
Offering for sale meats containing sulphite and added color	1
Use of cocoanut oil in manufacturing of ice cream	1
Manufacture of cider from rotten apples	1
Sale of adulterated drugs	1
Sale of cream from tubercular cows	1
Sale or offering for sale eggs unfit for food	33
Failure to candle eggs	31
Sale substandard ice cream	7
Manufacturing substandard ice cream	7
Keeping for sale meat unfit for food	4
Use of saccharin in manufacture of pop	4
Sale of lard containing added beef fat	1
Food and Drug Sanitary Law.	
Maintaining insanitary bakery	1
Maintaining insanitary grocery	9
Maintaining insanitary meat market	5
Maintaining insanitary drug store	1
Maintaining insanitary slaughter house	2
Maintaining insanitary soda fountain	1
Maintaining insanitary grocery and meat market	1
Maintaining unprotected food display	11
Transporting uncovered dressed beef	1
Weights and Measures Law.	
Violation bread-loaf weight law	17
Sale short-weight butter prints	2
Total	149

Analyst Robert H. DeRose, in charge of the Manhattan food laboratory, reports that feeding experiments with whole milk and skim milk are being conducted and will be reported on later and published in the monthly *Bulletin.*

June 11, 1921, United States District Judge John C. Pollock dismissed, at the costs of the complainant, the temporary injunction held against the State Board of Health in the case of Dr. Price's Cream Baking Powder.

The assistant chief food and drug inspector attended the annual conference on weights and measures in the United States held at Washington, D. C., on May 23 to 26, inclusive. This was a very important meeting from the standpoint of this department, for the reason that the subject given the most attention was that of the standard bread loaf, which has been so vitally urged and needed in this state. That meeting went on record as adopting a proposed standard loaf law, which in the main described a loaf of bread as one weighing one pound, and other legal-weight loaves being in half-pound multiples. The baking interests bitterly opposed the adoption of this standard, but could seemingly give no good reasons why it should not be. Final specifications and tolerances for liquid measuring devices were also established.

Report for Year Ending June 30, 1922.

This report covers work done by the Division of Food and Drugs for the year June 1, 1921, to June 1, 1922. On account of the fact that the legislature of 1921 failed to pass the Searle egg bill, which virtually embodied the regulations this department has adopted, the egg work was not done so intensively as in former years. In fact, only one inspector was assigned to exclusive egg work, and that was in coöperation with the United States Bureau of Chemistry in the examination of eggs shipped interstate. Last month this office mailed to grocers and all other dealers in eggs in the state a circular setting forth the egg-candling regulation, together with some hints and suggestions as to the care of eggs.

Sometime ago complaints were received to the effect that hucksters and other peddlers in some of the larger towns of the state were buying up stocks of canned goods which were usually either low grade or of such quality that they did not come up to the requirement of the brand under which they were sold, many of them being "swells" and "flippers," selling them to farmers and other unsuspecting persons in farming communities. On investigation we found that the complaints were warranted, and such steps were taken as were necessary to stop the practice. The wholesalers practically all agreed to discontinue selling such stock to hucksters and send to the dump all stuff that appeared in any way to be deteriorated. This problem is a difficult one to solve, as we are not able to show in all cases that even the cans which are puffed or swelled to be unfit for food, this being particularly true with fruits packed in heavy syrup.

On account of a complaint by a flavoring-extract manufacturer that itinerant venders were selling in Kansas extracts manufactured out of the state which contained added coloring matter, this office assigned its inspectors to investigate the wagons that sell such preparations throughout the state. The investigation revealed that a number of wagon venders soliciting from house to house were selling flavors and imitation extracts which contained added color. The matter was taken up with the manufacturers, and in reply they sent their attorney here from Winona, Minn., to present their case to the department. The case was presented in the form of a brief, in which was set forth their reasons why the regulation should not be enforced, etc. This brief was presented to the attorney-general's office for consideration, but up to this time no report on it has been received.

Owing to heavy frosts in California, the orange crop was badly damaged, and much precaution had to be observed by food and drug officials to prevent the shipment and sale of tree-frosted oranges. There is a regulation by this department which is identical with that of the federal government, to the effect that if 15 per cent of a shipment or lot of oranges shows marked drying on 20 per cent of the surface when the orange is cut transversely through the middle, the lot is considered adulterated. The federal law provides for the seizure of such adulterated foods shipped interstate, and this procedure is usually followed by the state officials who act for the federal government. As a result of our activities in Kansas two carloads were seized and information given which resulted in seizure of other cars at points outside the state to which they were diverted.

At the time of our last annual report, though our milk campaign in the eight southeastern towns had been finished, the report was not then in shape to present; therefore it will be incorporated with this report. As was heretofore stated, the bacteriological examination was made where the samples were collected, or in adjacent towns if it did not seem advisable to move or if transportation facilities were sufficiently adequate to warrant proper arrival of the samples. The chemical examinations were made at the laboratories at Manhattan and Lawrence. As a result of this survey several of the towns in which it was conducted passed new ordinances and made provision for their enforcement, or provided better enforcement for the adequate ordinances which they then had. Some prosecutions were also instituted. The campaign last year seemed to have been so successful and interest so keen that it was decided to make another this year, and at this writing the work has been completed in six towns, namely, Atchison, Emporia, Arkansas City, Winfield, El Dorado and Augusta. Doctor Levin, of the Public Health Laboratory, has equipped a very fine outfit, which consists of two shipping units, one of which is not always required to be taken, as some facilities are available in schools or colleges in the towns where the work is done. Doctor Levin has personally examined the milk so far this year and probably will be able to continue through the campaign, which will take most of the summer. It is expected that we will work about ten more towns. Since the milk problem is entirely a local matter, this department feels that if it can show the cities and towns wherein their milk supply is defective, it is up to them then to take such steps as are necessary to remedy the bad conditions and insure safer milk for their community. In every case so far we have been heartily welcomed and have been given fine support. Probably no work could be done by the Food and Drugs Division which would eventually render as much good to the citizens of the state as the milk work which we are now doing.

About two and one-half years ago a regulation was passed by the State Board of Health which required the sterilization of all drinking and eating utensils that came in contact with the mouth if used more than one time. Our inspectors were requested to advise all dealers in soft drinks and other commodities in which such utensils were used that some means would have to be provided for the sterilization of the utensils if individual service was not selected. Soon after the passage of the regulation Professor Sayre at his laboratory in Lawrence devised a preparation which, when diluted, would sterilize effectively any utensil by immersing same in the bath. This formula was published in our *Bulletin* and went into the hands of most of the dealers in the state. This year, in order to determine how well the sterilization regulation was being conformed with, we made a survey of 246 soda fountains, with the following results: 128 were using paper service to some extent; of these, 46 were reported to have been using paper exclusively, while the other 82 were using it only partially. Thirty-three of the 246 were reported to be making no attempt to sterilize nor to use receptacles only once. Thirty-two were using hot water exclusively; 17 used chemicals exclusively, while 4 used electric sterilizers. In one place where an electric sterilizer had been installed it was not being used. The remainder were sometimes attempting to sterilize by the use of hot water or chemicals. While this report seems to indicate that considerable progress has been made, I am of the opinion that very little actual sterilization is being done. Though 46 of the 246 are reported to be using paper service exclusively, no doubt frequently glasses are used to serve water. Though hot water is given as a means of sterilization in thirty-two cases, probably in practically no case has sterilization actually taken place. The water is usually heated in a tank in the basement or carried to the sink from a stove, when it is cooled to a temperature that will permit the use of the hands in the washing process. We are led to conclude by this report and from field observation that the most adequate means of providing safe service to the public at soda fountains and other places where drinks are served is by the use of paper cups or the use of a chemical bath for glasses or receptacles which are to be reused.

Owing to newspaper reports of the death of three children in Osborne, Kan., last August, said to have been caused by the eating of ice cream manufactured by a commercial ice-cream factory in Kansas, investigation was thought advisable. The result of this investigation was reported to the state dairy commissioner.

This division has coöperated with the Kansas City station of the United States Bureau of Chemistry even more this year than in previous years. This year we have collected federal samples of extracts reported to contain mineral oil; sweet corn which has been punctured and reprocessed; cove oysters short weight; blackberries thought to have been prepared from moldy fruit; oranges suspected of being damaged by tree frost; Cræmer's Celebrated Compound, exaggerated claims; chloroform thought to be deteriorated on account of age and kind of container; shell eggs.

Some time ago State Oil Inspector H. H. Motter conceived the idea of having his inspectors test oil- and gasoline-measuring devices used by retail dealers in oils and gasoline, providing such inspection would be authorized by this department. The plan seemed to be a good one, and since no State Board of Health funds were available with which to do such work, Doctor Crumbine commissioned Mr. Motter's inspectors "deputy state food inspectors," with authority to inspect weights and measures. By this means very effectual inspection has been rendered and many measuring devices, such as pumps, etc., either corrected or condemned. The report of this work will be made by the oil inspector's office.

During the year the following weight and measure work was accomplished:

Scales inspected	9,085
Scales condemned	42
Weights inspected	834
Weights condemned	23
Measures inspected	20
Measures condemned	1

For the twelve months closing May 31, 1922, 8,745 inspections in 1,234 towns were made, which covered every county of the state. In practically every county, county and city health officers or other county and city officials were visited by our inspectors, with the result that much better coöperation with these officials is expected. As is usually the case, more grocery stores and meat markets were inspected than any other class. This of course is due to the fact that there are many more such stores. Drug stores came next in number, the total inspected being 938. The appended table shows in detail the inspection work. Even though we were handicapped this year by a reduction in our inspection force, the work showing is considered good. Of the stores graded, 53.44 per cent are classed as "good," while 45.84 per cent are classed as "good to fair" and "fair." Only .72 per cent are classed as "poor." It is indeed very gratifying to be able to report that less than one store in 100 inspected is in the "poor" class. The inspections reported include very little work done in the three larger cities of the state. The cities of Kansas City, Wichita and Topeka have regular food departments; therefore it is not deemed advisable to do regular inspection work in these towns each year.

SUMMARY OF THE INSPECTIONS, 1922.

ESTABLISHMENTS.	Total.	Good.	Good to fair.	Fair.	Poor.	Special.
Bakeries	648	225	258	107	6	52
Bottling works	39	11	4	6	0	18
Confectioneries	367	218	82	57	2	8
County and city officials	118	0	0	0	0	118
Drug stores	938	514	277	129	2	16
Groceries	3,840	2,115	952	692	21	60
Groceries and meats	1,173	593	349	196	17	18
Food factories, cheese, ice cream, powdered milk, etc	43	6	5	6	0	26
Meat markets	787	422	220	115	6	24
Medicine wagons	11	0	0	0	0	11
Produce house and eggs	187	13	10	43	0	121
Slaughter houses and packing houses	14	1	1	3	3	6
Soda fountains	316	149	52	101	1	13
Stands, lunch and drinks, at fairs	182	0	0	0	0	182
Vinegar manufacturers	2	0	0	0	0	2
Weight investigations	80	0	0	0	0	80
Totals	8,745	4,267	2,210	1,455	58	755

During the period covered by this report considerable foodstuff was condemned as being "unfit for human food." The attached itemized account is self-explanatory. (The quantities are reduced to pounds and gallons to facilitate interpretation.) The total amount condemned during the year was 10,516 pounds and 566 gallons.

FOODS AND DRUGS CONDEMNED, JUNE 1, 1921, to JUNE 1, 1922.

FOODS.

ARTICLES.		Amount.	ARTICLES.		Amount.
Baking powder	lbs.	12	Gum, chewing	lbs.	100
Beverages:			Macaroni	lbs.	22
So-called cider	gals.	96	Malt	lbs.	50
Wineberry, etc	gals.	7	Meats:		
Bread	lbs.	57	Fish	lbs.	245
Candy	lbs.	2,722	Cured meats	lbs.	100
Coffee	lbs.	18	Fresh meats	lbs.	150
Cocoanut	lbs.	131	Soup	lbs.	3
Cookies	lbs.	110	Meal: Cornmeal	lbs.	60
Crackers	lbs.	547	Nut meats	lbs.	420
Egg preserver	lbs.	20	Olives	gals.	5
Flavoring extracts	lbs.	79	Prepared breakfast cereals	lbs.	69
Flour:			Pickles and relish	qts.	73
Cake flour	lbs.	2,872	Rice	lbs.	30
Prepared barley	lbs.	5	Rolled oats	lbs.	230
Graham	lbs.	10	Salad dressing	½ pts.	144
Pancake flour	lbs.	230	Salt	lbs.	6
Rye flour	lbs.	5	Syrup	lbs.	65
Whole wheat	lbs.	336	Sugar	lbs.	50
Fruits:			Vegetables, canned	lbs.	394
Canned berries	lbs.	207	Vinegar	gals.	431
Miscellaneous canned fruit	lbs.	354	Yeast foam	doz.	2
Jam	lbs.	280			
Evaporated	lbs.	515			

DRUGS.

Syrup iodide of iron	lbs.	5	Nitre, sweet spirits	lb.	1
Syrup hydriatic acid	lbs.	4			

The number of prosecutions was less this year than the year before, due chiefly, we believe, to the bettering of conditions and the fact that our egg activities were very much lessened. This year there were 32 prosecutions terminated for violation of the food and drugs law, 26 for violation of the food and drugs sanitary law, and 2 for violations of the weights and measures law. The outstanding number of prosecutions for violation of the food and drugs law was for the sale or offering for sale of dirty, substandard or watered milk. The principal cause for prosecution under the food and drugs sanitary law was for that of maintaining insanitary grocery stores.

PROSECUTIONS FOR VIOLATION OF FOOD AND DRUGS LAW JUNE 1, 1921, TO JUNE 1, 1922.

Food and Drugs Law.	
Sale of substandard, watered or dirty milk	19
Offering for sale meats containing sulphite and added color	1
Sale of watered oysters	1
Sale or offering for sale eggs unfit for food	1
Insanitary handling of milk when offering for sale	5
Sale of spoiled berries	1
Sale of spoiled canned goods	1
Sale of adulterated and misbranded flavoring extract	1
Sale of spoiled meat	1
Interfering with inspection of grocery store	1
Food and Drugs Sanitary Law.	
Maintaining an insanitary bakery	1
Maintaining an insanitary grocery	9
Maintaining an insanitary drug store and fountain	1
Maintaining an insanitary slaughter house	3
Maintaining an insanitary meat market	2
Maintaining an insanitary grocery and meat market	3
Maintaining an insanitary confectionery	3
Transportation of uncovered meats	2
Sale of unwrapped bread	2
Weights and Measures Law.	
Violation of bread-loaf weight law	2
Total	60

REPORT OF THE STATE DRUG LABORATORY, 1921.

G. N. Watson, Chemist.

The samples sent to this laboratory by the inspectors include linseed oil, sweet spirit of nitre, lime water, alcohol, tincture of iodine, spirit of camphor, essence of peppermint, disinfectants, and such proprietaries as Aspironal, Egyptian Wonder, and Marshall's New Remedy.

In the matter of adulteration spirit of camphor leads the list. Thirty per cent of the samples received were adulterated. Much of this adulteration was due to added water. It was reasonable to believe that this condition was the result of difficulty in obtaining pure alcohol. However, the analysis of nine samples of alcohol obtained from stores in different parts of the state showed it to be of U. S. P. quality. Sweet spirit of nitre was in most instances found to be substandard. It should be noted, however, that this preparation has shown a decided improvement during the past decade. A few years ago it was not uncommon to find sweet spirit of nitre on the market containing little or no ethyl nitrite. The present product is rarely found to be below 2 or 2½ per cent. Considering the relative instability of this product, there is evidence of marked improvement in method of preservation.

The laboratory has had its usual number of outside analyses, including prescriptions for formula, and foods, drugs, and viscera for poisons.

A special investigation was made of the disinfectants of the chlorine group both for chlorine content and phenol coefficient. Representative preparations of this class of disinfectants are Chloramine T, B-K, B-D, Fecto and Electrofied Chlorine.

Considerable research has been done on coffee substitutes with special reference to their phenolic constituents, or decomposition products of roasting.

At the present time work is being done, both chemical and microscopical, on authentic samples of the four official varieties of ginger, namely, Jamaica, Cochin, Japan, and African. The latter work has to do primarily with the Pharmacopœal revision, but will be of equal value to the laboratory.

REPORT OF THE STATE FOOD LABORATORY, LAWRENCE, 1921.

By E. H. S. Bailey and Walter S. Long.

The following report covers the work of the State Food Laboratory for the year just passed. The work is summarized in the following tabulated form, which shows:

(*a*) The classes of products examined.
(*b*) The number of samples received during each month.
(*c*) The number of samples received during the year.
(*d*) The number of samples in each class for each month.
(*e*) The number of samples in each class for the year.
(*f*) The number and percentage of illegal samples for each month.
(*g*) The number and percentage of illegal samples for the year.

The total number of samples for the year, namely, 631, represents an increase of 56 over that of the previous annual report. The per cent of samples classed as illegal is about one point higher than the corresponding figure for last year.

The various classes of products as given in the table will now be considered with special reference to those which show violation of the law.

WORK OF FOOD LABORATORY, BY MONTHS, 1920 AND 1921.

	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Total.	Illegal.	Per cent.
Beverages.......	36	2	18	4	0	9	7	7	0	2	7	0	92	55	59.7
Ice cream.......	7	45	40	23	2	39	0	0	0	0	1	0	139	93	66.9
Milk............	4	0	10	2	3	0	0	1	0	0	0	95	115	5	4.4
Mustard.........	0	0	0	0	0	6	0	6	12	0	0	13	37	7	18.9
Preserves........	0	0	0	0	0	0	0	22	5	1	0	6	34	19	55.9
Vanilla..........	0	0	0	0	0	13	1	0	0	0	0	0	14	0	0
Vinegar.........	0	0	1	0	1	1	0	4	36	24	2	9	78	40	51.3
Miscellaneous....	3	10	4	11	12	9	12	6	10	9	9	9	104	23	22.1
Monthly total..	50	57	73	30	18	7	20	46	63	36	19	132	631	242	....
Per cent illegal...	60.4	71.9	46.6	13.3	0	35	25	56.5	33.3	55.5	57.9	15.9	....	38.3	....

BEVERAGES.

ALCOHOLIC BEVERAGES.

Samples of this class, in the main, were sent to the laboratory by those interested in the enforcement of liquor laws. The points of interest connected with these are tabulated below:

Sample.	*Source.*	*Per cent alcohol.*
Whisky	Dodge City	41.1
Whisky	Dodge City	44.5
Whisky	Dodge City	47.8
Whisky	Dodge City	42.5
Whisky	Dodge City	42.0
Whisky	Dodge City	44.5
Brandy	Dodge City	21.0
Whisky	Dodge City	43.3
Whisky	Dodge City	46.9
Wine	Dodge City	12.8
Home brew	Topeka	2.6
Home brew	Topeka	1.6
Cider	El Dorado	0.2
Corn whisky	Dodge City	34.6
Corn whisky	Dodge City	34.5
Beer	Jefferson county	3.2
Beer	Jefferson county	3.2
Alcohol	Lawrence	72.6
Whisky	Troy	40.9
Beverage	Lawrence	19.0
Home brew	Lawrence	7.2
Cider	Topeka	1.8
Cider	Topeka	1.1
Cider	Topeka	3.3
White mule	Pottawatomie agency	5.9
Whisky	Osage City	45.4
Wine	Anthony	11.6
Home brew	Topeka	2.0
Whisky	Lawrence	40.2
Home brew	Lawrence	6.1
Home brew	Lawrence	5.0

CARBONATED BEVERAGES.

In this list are included cherry, root beer, grape, strawberry, orange, cream, peach, lemon sour, and ginger ale sodas.

Twenty-three samples of pop were sold in violation of the law regulation prohibiting the use of saccharine. Four samples of ginger ale contained capsicum.

ICE CREAM.

The ninety-three samples of ice cream classed illegal were substandard in butter-fat content. The following tabulated results may be of interest:

Source.	*Fat content.*
Kansas City, Mo.	9.96
Kansas City, Mo.	9.33
Kansas City, Mo.	8.91
Kansas City, Mo.	10.89
Kansas City, Mo.	12.33
Kansas City, Mo.	11.09
Wichita	9.50
Wichita	11.00
Wichita	10.50
Garnett	12.00
Paola	12.00
Paola	12.00
Emporia	13.50
Emporia	12.50
Kansas City, Mo.	9.87
Kansas City, Mo.	9.92
Kansas City, Mo.	9.86
Kansas City, Mo.	8.16
Kansas City, Mo.	8.87
Kansas City, Mo.	8.34
Kansas City, Mo.	7.27
Kansas City, Mo.	6.82
Kansas City, Mo.	8.05
Kansas City, Mo.	6.52
Kansas City, Mo.	5.12
Hutchinson	10.00
Hutchinson	7.00
Hutchinson	10.50
Hutchinson	10.50
Arkansas City	12.50
Wichita	10.47
Wichita	10.50
Wichita	11.00
Wichita	13.30
Wichita	11.28
Wichita	12.20
Wichita	11.00
Manhattan	11.07
Manhattan	11.70
Topeka	11.96
Topeka	11.02
Wichita	9.75
Wichita	12.90
Wichita	13.00
Wichita	9.29
Wichita	6.90
Wichita	7.77
Wichita	9.00
Wichita	7.29
Wichita	8.00
Wichita	9.00
Osawatomie	4.80
Osawatomie	4.80
Osawatomie	11.50
Ottawa	10.30
Ottawa	10.00
Ottawa	10.50
Ottawa	10.50
Ottawa	10.50
Wichita	4.19
Wichita	9.97
Wichita	6.55
Wichita	11.73
Wichita	13.78
Wichita	13.50
Wichita	13.50
Arkansas City	13.00
Lawrence	10.00
Lawrence	13.00
Garnett	13.00
Garnett	10.50
Garnett	13.00
Wichita	11.06
Wichita	13.13
Wichita	10.40
Wichita	11.20
Manhattan	11.78
Manhattan	10.32
Topeka	13.10
Topeka	11.62
Topeka	12.14

MILK.

Five samples of milk were found to be substandard as to fat content.

MUSTARD.

Six samples of prepared mustard contained excess hulls. Samples of horse-radish mustard were found to contain no horse-radish. Other samples were misbranded as to net contents.

PRESERVES.

Included under this head are jams, jellies and preserves proper. Nineteen samples belonging to this class were considered as violating the law in one or more of the following particulars:

Substitution of apple juice, or jelly, for whole fruit.
Substitution of corn syrup for sucrose.
Insufficient fruit of the variety claimed.
Substandard sugar content.

VINEGAR.

Forty samples of vinegar were found to be adulterated in one or more of the following ways:

Insufficient fermentation.
Partial substitution of dilute acetic acid or distilled vinegar.
Addition of water and solids of high ash and low phosphate content.
Partial substitution of corn-sugar vinegar.
The use of added coloring matter.

MISCELLANEOUS.

The following products are included in this class: ripe olives, chewing gum, pork and beans, infants' food, cocoanut, ice-cream mixture, cocoanut oil, tablets, water, meat, sugar, honey, catsup, peas, flour, tomatoes, beans, salt, raisins, shorts, coffee, raspberries, kraut, malt syrup, pumpkin, human milk, powdered lemon juice, grape fruit, chicken tonic, pie filling, bran, lemons, albumin, gelatin, salmon, apples, corn syrup, peaches, candy, pectin, and cherries.

The points of interest with reference to these follow:

Sample.	*Source.*	*Remarks.*
1 Candy	Lawrence	Contained glass.
2 Peaches	Coffeyville	Three quarts sold for a gallon.
2 Apples	Coffeyville	Three quarts sold for a gallon.
1 Syrup	Coffeyville	Three quarts sold for a gallon.
1 Flour	Lindsborg	Overbleached.
1 Catsup	Topeka	Decomposed material.
1 Pie filling		No ingredient of lemon present as represented.
2 Honey	Topeka	Contained corn syrup.
3 Grape fruit	Topeka	Immature.
1 P'wd'rd lemon juice,	Syracuse, N. Y.	Not exclusively the product of lemons; dextrin present.
6 Kraut	Kansas City	Decomposed.
26 Raspberries	Kansas City	Swollen goods; fermented.
1 Raisins		Infected by insects.
1 Meat	Council Grove	Tainted.
1 Ripe olives	Los Angeles	Swollen goods.

The stomachs of two dogs which died from poisoning were found to contain strychnine. A number of tablets found in a coffee pot were found to contain corrosive sublimate. A sample of so-called "salt" which had caused the death of a number of hogs and cattle proved to be a compound of arsenic.

REPORT OF THE STATE FOOD LABORATORY, LAWRENCE, 1922.

By E. H. S. Bailey and H. Werner.

The summary of the work for the year ending May 31, 1922, is herewith presented in tabulated form.

The total number of samples analyzed was 244, under which were included the following classes of goods: beverages, canned goods, extracts, grain products, honey, sugars, milk, olive oil, vinegar, and miscellaneous food products. (See table No. 1.)

In connection with this summary it is interesting to note the work in connection with beverages which were submitted by officials interested in the enforcement of the state prohibition law. This phase of the work is tabulated in table No. 2.

A summary of some work on canned fruits submitted is shown in table No. 3. These goods were all classed as hard swells, containing hydrogen, and in the majority of cases a high but legal amount of tin per kilo, ranging from a few milligrams to 270 milligrams of tin per kilo. The bacteriological findings of these canned fruits showed only two samples to be contaminated. It is of interest to note that such fruits as blackberries and loganberries are shown to give rise to more cases of hard swells than other goods. It was apparent from the analyses of these two classes of foods that fermentation had taken place at some time or other to a limited extent and it is probable that sterilization was affected by the product of fermentation. The only judgment that would be given on these "hard swells" was that of "passed," although the swelled appearance of the can would indicate its undesirability as a food, and it is probable from the external appearance of these goods that the consumer would not be particularly induced to purchase them. As a suggestion it might be interesting, if facilities afford it, to make an investigation at the canning plants of the cause of this appearance of swelled goods among these two classes of fruits.

A representative number of samples of olive oil from different sources was analyzed, and as will be seen from table No. 1, the standard of purity is exceptionally high, especially in view of the fact that a number of adulterated samples of olive oils had been discovered in other parts of the country. None of the samples of oils analyzed showed adulteration, although two of them showed the so-called pseudo-sesame test, which is a peculiarity of some olive oils from Portugal.

TABLE No. 1. WORK OF FOOD LABORATORY, BY MONTHS, 1921-1922.

	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	April.	May.	Total.	Illegal.
Beverages	2	1	7	24	3	5	1	3	0	8	1	8	63	28
Candy	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Canned goods	0	0	1	18	5	24	0	1	0	9	0	0	58	16
Extracts	2	0	0	3	5	7	0	0	1	5	6	0	29	10
Grain products	0	0	2	1	0	0	0	0	0	1	0	0	4	2
Honey and sugars	0	2	0	0	1	1	0	1	0	0	1	1	7	2
Ice cream	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Milk	0	1	10	0	2	1	0	0	3	8	10	8	43	8
Olive oil	0	0	0	0	0	2	6	1	1	0	0	0	10	0
Vinegar	0	7	0	0	0	0	0	0	0	1	1	0	9	1
Miscellaneous	0	2	3	5	2	1	0	3	0	4	1	0	21	3
Totals	4	13	23	51	18	41	7	9	5	36	20	17	224	70
Illegal	....	4	5	4	5	17	1	3	1	16	4	10	....	....

TABLE No. 2.

Sample.	*Source.*	*Per cent alcohol.*
Home brew		87.85
Whisky	Kansas City	36.5
Whisky	Kansas City	30.64
Whisky	Kansas City	15.60
Whisky	Topeka	35.0
Whisky	Concordia	42.25
Whisky	Lawrence	61.10
Whisky	Lawrence	38.70
Whisky	Lawrence	38.75
Whisky	Garnett	39.60
Whisky	Lawrence	38.70
Whisky	Lawrence	47.25
Whisky	Lawrence	37.05
Whisky	Lawrence	56.50
Whisky	Lawrence	25.90
Beer	Columbus	5.18
Grape wine	Lawrence	12.50

TABLE No. 3.

Sample.	*Passed.*	*Illegal.*
Apple butter	4	0
Blackberries	8	0
Cherries	2	0
Gooseberries	1	0
Loganberries	8	1
Peaches	1	1
Strawberries	2	0
Tomatoes	3	0

REPORT OF FOOD LABORATORY, MANHATTAN, 1921-1922.

Sample.	*Total analyses.*	*Total legal.*	*Total illegal.*
Milk	335	296	39
Cream	1	1	0
Ice cream (one leaked out)	21	16	4
Hamburg	5	4	1
Minced sausage	3	0	3
Weiners	1	0	1
Saltpeter	2	0	2
Icene brine	1	1	0
Oleomargarine	11	11	0
Buckwheat flour	1	1	0
Sweetened condensed milk	2	1	1
Cheese	11	11	0
	394	342	51

NOTE.—For detail report of food analyses above summarized the reader is referred to the State Board of Health *Bulletin* in which they are published.

REPORT OF THE FOOD LABORATORY, K. S. A. C., MANHATTAN, 1921-1922.

Dr. H. H. King, Director, H. Robt. DeRose, Analyst.

June 1, 1921, to June 1, 1922.

	June.	July.	Aug.	Sept.	Oct.	Nov.	Jan.	Feb.	Mar.	April.	May.
Butter						1				2	
Catsup							6				
Cheese									5		
Gelatine	16	5		1						1	
Hamburger					12	6					
Ice cream		2	2								
Ice-cream powder				21							
Lard										3	
Milk						1					40
Milk, evaporated					9						
Milk, malted					1						
Milk, mother's		1									
Milk, skim, powder				1							
Noodles						4					
Rye bread								9			
Rye flour								10			
Salmon											1
Sardines										1	
Sausage					12	8					
Spaghetti						7					
Spice							4				

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DIVISION OF VITAL STATISTICS.

Report for Year Ending June 30, 1921.

The annual report of the Division of Vital Statistics as rendered at this time will present some of the more important statistics covering the year 1920. So far as the occurrence of events important to this division, however, the most important happenings have been in the year 1921, being associated with the 1921 session of the state legislature.

The legislature took action on two matters of far-reaching importance to the work of this division. One was unfavorable, being the killing of our bill to change the marriage-license registration fee to one dollar. The passage of this bill would have allowed us an adequate amount for carrying on the work of this division. It is bound to come at a later time. Our records are piling up in greater magnitude every year. The additional work that comes to us in preparing certificates for compensation and pensions of ex-service men almost requires full time for a clerk. Our files are far from being readily accessible. Records that are not easily accessible are dead. So eventually the legislature must increase our strength, and the logical manner is to double the fee that supports us. The other measure was favorable, since it authorized the employment of a statistician at $1,800 per annum. This is not an additional office. Mr. L. P. Kistler had been our statistician for two years, but had been paid from a special fund. Now we are authorized to employ the statistician and pay him from marriage registration fees.

It was with much regret that we were obliged to accept the resignation of Mr. Kistler, effective March 31, 1921. We were fortunate in securing as his successor Mr. W. J. Davies, of Dodge City, who serves to lighten our loss somewhat, since he fits into the division and the department with a degree of efficiency and harmony that is very gratifying.

As was predicted in our last annual report, the state death rate is slightly higher, the 1920 rate being 11.5, against a rate for 1919 of 10.9. The new rate is still very low and needs no explanation.

Our birth rate for 1920 is 22.9, against the 1919 rate of 21.1. This rate compares very favorably with the five preceding years, being exceeded only by the year 1916, which had a rate of 24.

Our infant mortality rate is 71.6. This is a little higher than 1919, which was 68.5, but still a material reduction from 1918—78.5.

Tuberculosis has made a notable drop in its death rate, being down to 49.3, the lowest official record in the history of the state.

Death rates from the degenerative diseases of middle and advanced age, which were very low in 1919, have increased somewhat. Organic heart disease has gone from 85 to 103; cerebral hemmorhage from 92.3 to 104; Bright's disease from 66.4 to 70.2; cancer from 69.7 to 74.4. The 1920 rates are not abnormally high, but the 1919 rates were unusually low, probably because so many persons already suffering from these diseases were carried off in the influenza pandemic.

COMPARISON OF DEATH RATES OF CERTAIN COMMON CLASSIFICATIONS,

Based on number of deaths per 100,000 of population.

	1916.	*1917.*	*1918.*	*1919.*	*1920.*
Pneumonia	100.4	123.8	348.9	130.6	131.6
Influenza	27.0	24.3	150.0	74.8	60.0
Organic heart disease	108.9	112.4	102.1	85.0	103.0
Cerebral hemorrhage and paralysis	94.1	95.4	96.1	92.3	104.0
Bright's disease	76.6	88.6	75.2	66.4	70.2
Cancer	71.2	70.6	73.1	69.7	74.4
Tuberculosis	56.4	58.6	59.9	50.8	49.3
Diarrhœa and enteritis (under two-years old)	46.8	45.3	30.6	25.0	30.0
Typhoid fever	15.3	19.2	16.4	7.6	7.8
Diphtheria	11.3	8.9	7.5	10.8	14.9
Suicide	10.6	9.5	12.4	12.1	10.5
Homicide	8.5	6.2	5.4	6.8	5.0

There were 22,507 marriages, the rate being 12.7. This is over 2,000 more marriages than in 1919. We received from marriage licenses and fees for certified copies, $11,423.

Expenditures of this division for 1920 were: Salaries, $8,974.18; office expense, $644.41; total, $9,618.59.

Report for Year Ending June 30, 1922.

The annual report of the Division of Vital Statistics for the year ending June 30, 1922, will necessarily have to present figures for 1921 mortality, since statistics are not compiled later than that.

No doubt you have already read many reports as published by the Metropolitan Life Insurance Company and by many state boards of health, indicating that 1921 was a remarkable year for health. The statistics of this Board bear these statements out very well.

In tuberculosis we are able to present as low a death rate as the state has ever had since death reports have been kept. The total deaths from all forms of tuberculosis numbered only 778, giving us the very low death rate of 43.4, which is probably the lowest in the United States of any state in the registration area, although I cannot say definitely as to this, since 1921 records are not generally available.

Influenza was negligible in the year 1921, the death rate dropping to 9.2.

Even pneumonia presents a very low death rate, coming down from its 1920 record of 129.4 to the low rate of 58.4.

Death rates from degenerative diseases of middle and advanced age do not vary greatly.

Organic heart disease has dropped, however, from 102.5 in 1920 to 89.5.

Cerebral hemmorhage and paralysis combined give us a death rate of 100.7, which is about the same as for several years past.

Bright's disease shows an increase from 69.9 in 1920 to 81 in 1921.

Cancer also has gone from 70 to 78.5.

It must be remembered that in years when influenza and pneumonia are rampant, many old persons who are in a weakened condition are carried off by these diseases and are so diagnosed, although they may be suffering from some of the other diseases of advanced age, whereas in years such as this, in which pneumonia and influenza rates are low, the more basic diseases are diagnosed and their rate is increased.

This explanation, however, does not serve to disguise the fact that there is altogether too great an increase in the death rates from these degenerative diseases of middle life and advanced age.

A table is appended to this report showing deaths from the more important diseases for each of the last five years, which is interesting for purposes of comparison.

COMPARISON OF DEATH RATES OF CERTAIN COMMON CLASSIFICATIONS.

Based on number of deaths per 100,000 of population.

	1917.	*1918.*	*1919.*	*1920.*	*1921.*
Pneumonia	123.8	348.9	130.6	131.6	58.5
Influenza	24.3	150.0	74.8	60.0	9.2
Organic heart disease	112.4	102.1	85.0	103.0	89.5
Cerebral hemorrhage and paralysis	95.4	96.1	92.3	104.0	100.0
Bright's disease	88.6	75.2	66.4	70.2	81.0
Cancer	70.6	73.1	69.7	71.0	78.5
Tuberculosis	58.6	59.9	50.8	49.3	43.4
Diarrhœa and enteritis (under two-years old)	45.3	30.6	25.0	30.0	25.7
Typhoid fever	19.2	16.4	7.6	7.8	8.5
Diphtheria	8.9	7.5	10.8	14.9	21.5
Suicide	9.5	12.4	12.1	10.5	11.6
Homicide	6.2	5.4	6.8	5.0	7.7

Our crude death rate for the year 1921 presents the extremely low rate of 10.2, which is the lowest rate since 1912, and of course it must be borne in mind that 1912 was a year in which death reporting was far from reliable as compared to the present time.

Kansas is also to be congratulated upon its 1921 birth rate, which advanced to the point of 23.7. Our marriage rate, however, is far from satisfactory. The total number of marriages is only 20,249, as against 22,507 in 1920, the marriage rate having dropped from 25.2 in 1920 to 22.6 in 1921. While some may consider that this is scarcely the concern of the State Board of Health, we must bear in mind that marriages are decidedly necessary for the preservation of the health of the state, and a low marriage rate may well be a point for us to consider seriously.

In last year's report mention was made of the fact that the legislature in its session of 1921 had reported unfavorably on a bill designed to increase the revenue apportioned to the Division of Vital Statistics from marriage licenses, and that therefore the work could not be extended. I wish to impress upon the State Board of Health at this time the peremptory importance of instituting very active measures to enact at the next session of the legislature such changes in the statute as will give this division more money for this work. I am able to present this matter with greater freedom, in view of the fact that I am no longer officially connected with the division.

I wish to impress upon this Board that, although we are apparently getting along and doing satisfactory work, this is chiefly a matter of appearance and is not justified by the actual facts. The facts are that the present employees are doing excellent work in taking care of certificates as they come in, examining them, securing the proper data and filing them away, but that no provision is being made for taking care of the vast accumulation of certificates that have piled up in the many years since birth registration has been required by our statutes, and until much additional clerical help is provided for taking care of these files they are bound to remain in a state that is little better than chaotic.

Searching for the record of a birth in the back files of the Kansas State Board of Health is comparable in some measure to the attempt to make a diagnosis of tuberculosis by a laboratory examination of sputum. If you do find germs in the sputum, you know the disease is present. If you don't find them, you simply know that there are no germs in the sample submitted. Thus in searching for a back record of birth, its absence merely indicates that it has not been found. Until a much greater amount of help can be employed to go over all of these back records and put them in absolutely reliable condition it cannot be said that the birth and death records of the State Department of Health are properly compiled.

Furthermore, this difficulty is bound to increase from year to year, since these records are constantly accumulating, and if we follow our present simple system for another decade it will take a clerk the best part of a day to search out a single record whenever there is any question whatever as to full and complete data being provided.

In resigning from the position of state registrar and making this my last report as chief of that division, I know of no better service that I can do than to impress upon the State Board of Health the absolute importance of insisting upon measures to provide the division with sufficient money to employ clerical aid that will not only be competent to handle current records as they are reported, but will be able to go back to the old archives and so arrange the files that any record of birth or death of a citizen of Kansas will be positively available upon very short notice.

One other point in reference to the financial situation of the division is the necessity for increasing the salary of the state registrar. To ask a man who is both expert as a statistician and also a graduate in medicine to give his services to the state for the sum of $2,400 is nothing less than a howling absurdity.

These are important matters which should be an especial charge upon the State Board of Health at this time.

My resignation as state registrar became effective April 30. As you members of the Board will remember, I have had your permission for some time past to give a share of my attention to the affairs of the State Tuberculosis Society as its executive secretary. The work of this association becoming more and more onerous, it became evident that it was impossible for one man to do justice to both positions. I therefore resigned the office of state registrar and the executive secretary appointed Mr. William J. Davies as acting state registrar, effective May 1.

I regret exceedingly the necessity of severing my connection with the Division of Vital Statistics, the work of which I found wholly engrossing. I regret having to leave the admirable personnel of the division and of the office at large. However, my connection as a member of the Board still exists and I shall hope to continue to be counted in as a member of the official family.

CHARLES H. LERRIGO.

TABLE No. 1. Showing population, deaths and death rates per 1,000 population, by counties, 1920 and 1921 (still births not included).

COUNTIES AND CITIES.	1920.			1921.		
	Population.	Deaths.	Death rate per 1,000.	Population.	Deaths.	Death rate per 1,000.
STATE TOTALS	1,779,936	20,306	11.5	1,792,496	18,244	10.2
Allen, except	16,491	157	9.5	16,526	184	11.1
Iola	9,004	137	15.2	8,872	119	13.4
Anderson	12,647	149	11.7	12,291	148	12.0
Atchison, except	10,773	104	9.6	11,430	84	7.3
Atchison city	14,811	206	13.9	15,280	164	10.7
Barber	9,394	82	8.7	9,263	74	7.9
Barton, except	13,581	119	8.7	13,702	120	8.7
Great Bend	4,821	84	17.4	5,006	75	14.9
Bourbon, except	12,330	114	9.2	12,725	114	8.9
Fort Scott	12,839	179	13.9	12,344	167	13.5
Brown	20,735	196	9.4	20,437	214	10.4
Butler, except	26,834	156	5.8	25,739	137	5.4
Augusta	4,185	58	13.8	4,338	62	14.3
El Dorado	11,267	136	12.0	11,284	92	8.1
Chase	6,256	70	11.1	6,755	46	6.8
Chautauqua	11,568	146	12.6	11,843	127	10.7
Cherokee, except	30,391	382	12.5	30,473	285	9.3
Galena	4,758	73	11.7	4,712	65	13.7
Cheyenne	5,731	46	9.3	5,780	39	6.7
Clark	5,021	27	8.4	4,880	17	3.5
Clay	15,697	134	8.5	15,630	129	8.2
Cloud, except	12,720	126	9.9	12,888	120	9.3
Concordia	4,758	102	21.4	4,641	111	23.8
Coffey	15,017	136	9.0	15,029	141	9.3
Comanche	5,136	38	7.3	5,062	29	5.7
Cowley, except	16,092	135	8.4	14,906	151	10.1
Arkansas City	11,555	168	14.5	11,513	135	11.7
Winfield	8,816	158	17.9	8,931	122	13.7
Crawford, except	43,037	486	11.3	42,719	406	9.5
Pittsburg	18,111	142	7.8	18,074	161	8.8
Decatur	8,015	74	9.2	8,063	76	9.4
Dickinson	26,389	263	10.0	25,320	236	9.2
Doniphan	15,249	130	8.5	15,279	132	8.6
Douglas, except	11,628	105	9.0	11,612	93	8.0
Lawrence	13,474	175	13.1	13,503	180	13.3
Edwards	6,734	78	11.6	6,808	55	8.5
Elk	10,364	94	9.5	10,239	72	7.0
Ellis	14,180	178	12.6	14,771	176	12.0
Ellsworth	10,075	110	10.9	10,191	119	11.6
Finney	7,736	81	10.4	7,453	83	11.1
Ford, except	9,700	114	11.7	9,164	89	9.7
Dodge City	5,138	86	16.7	6,038	68	11.2
Franklin, except	13,436	133	9.9	12,748	104	8.1
Ottawa	9,545	145	15.1	9,520	111	11.6
Geary, except	5,745	53	9.2	6,330	39	6.1
Junction City	6,449	95	14.7	7,068	82	11.6
Gove	5,009	44	8.7	5,109	33	6.4
Graham	7,488	76	10.1	7,483	44	5.9
Grant	1,142	6	5.2	1,306	5	3.8
Gray	4,251	34	8.0	4,640	32	6.9
Greeley	1,136	6	5.2	1,133	6	5.4
Greenwood	14,674	117	8.0	15,237	137	9.0
Hamilton	2,357	27	11.4	2,488	28	11.2
Harper	13,554	141	10.4	13,473	107	7.9
Harvey, except	10,782	135	12.5	10,842	119	11.0
Newton	9,784	189	18.2	9,773	155	15.8
Haskell	1,305	10	7.6	1,621	11	6.7
Hodgeman	3,752	26	6.9	3,555	19	5.3
Jackson	15,023	151	10.0	15,135	159	10.5
Jefferson	14,297	117	8.2	14,031	127	9.0
Jewell	15,696	108	6.9	15,461	127	8.2
Johnson	17,564	203	11.6	17,890	210	11.7
Kearny	2,532	22	8.6	2,487	16	6.4
Kingman	12,182	126	10.3	11,705	104	8.8
Kiowa	6,017	56	9.3	6,099	42	6.0
Labette, except	18,008	281	15.9	17,754	224	12.6
Parsons	16,932	199	12.1	17,521	164	9.3
Lane	2,586	25	9.7	2,702	16	5.9
Leavenworth, except	20,380	436	21.4	20,857	436	20.8
Leavenworth city	19,969	254	12.7	20,009	244	12.2

TABLE No. 1—CONCLUDED.

COUNTIES AND CITIES.	1920.			1921.		
	Population.	Deaths.	Death rate per 1,000.	Population.	Deaths.	Death rate per 1,000.
Lincoln	10,014	85	8.4	10,011	59	5.9
Linn	15,059	166	11.0	15,176	147	9.7
Logan	3,521	21	5.9	3,618	28	7.7
Lyon, except	14,777	136	9.2	14,472	113	7.8
Emporia	11,537	184	15.9	12,024	143	11.9
Marion	24,302	268	11.0	25,948	201	7.8
Marshall	22,748	211	10.2	22,467	191	8.5
McPherson	21,361	230	10.8	21,331	209	13.6
Meade	5,414	33	6.1	5,339	34	6.3
Miami	18,033	356	19.7	18,743	306	16.3
Mitchell	13,560	136	10.0	13,055	159	12.2
Montgomery, except	23,717	300	12.6	24,602	272	11.0
Coffeyville	16,569	210	12.7	16,067	178	11.0
Independence	12,664	166	13.1	12,577	134	10.6
Morris	12,003	102	8.5	12,046	96	7.9
Morton	3,305	26	7.8	3,227	18	5.5
Nemaha	18,435	163	8.8	18,457	139	7.5
Neosho, except	13,432	130	9.7	12,976	118	9.1
Chanute	10,630	167	15.7	11,079	166	15.0
Ness	7,123	50	7.0	7,466	58	7.7
Norton	11,227	122	10.9	11,467	128	11.1
Osage	20,176	207	10.3	20,021	181	9.0
Osborne	12,516	108	8.6	12,765	116	9.1
Ottawa	10,553	89	7.9	10,591	113	10.7
Pawnee	8,914	78	8.7	8,153	111	12.0
Phillips	12,222	119	9.7	12,743	100	7.8
Pottawatomie	15,495	172	11.1	15,180	141	9.3
Pratt	12,516	125	10.0	12,809	104	8.1
Rawlins	6,333	98	15.4	6,370	57	8.9
Reno, except	21,696	181	8.3	20,970	160	7.6
Hutchinson	26,798	330	12.3	27,016	260	9.6
Republic	15,470	151	9.7	15,901	129	8.1
Rice	14,647	159	10.9	13,997	145	10.3
Riley, except	9,531	83	8.7	9,609	65	6.7
Manhattan	7,485	89	11.9	6,706	84	12.5
Rooks	9,760	83	8.5	10,147	74	7.2
Rush	8,399	69	8.2	8,133	62	7.6
Russell	10,579	88	8.3	10,979	88	8.1
Saline, except	9,881	81	8.2	9,799	60	6.2
Salina	15,104	205	13.5	15,401	186	12.0
Scott	3,124	24	7.7	3,362	31	9.2
Sedgwick, except	20,395	147	7.2	19,675	120	6.6
Wichita	77,061	1,110	14.4	79,571	974	12.2
Seward	6,327	81	12.7	6,265	84	13.4
Shawnee, except	19,137	288	15.0	20,386	314	15.4
Topeka	50,022	764	15.2	49,600	726	14.2
Sheridan	5,510	49	8.8	5,667	47	8.2
Sherman	5,638	60	10.7	5,729	38	6.6
Smith	15,021	112	7.4	15,127	115	7.6
Stafford	11,426	137	12.0	11,257	87	7.7
Stanton	1,025	5	4.8	1,008	3	3.0
Stevens	3,802	24	6.3	4,060	29	7.1
Sumner, except	21,651	202	9.3	21,002	161	7.6
Wellington	6,713	125	18.6	6,944	84	12.1
Thomas	5,382	36	6.7	5,824	46	7.9
Trego	6,006	43	7.1	6,088	43	7.0
Wabaunsee	11,055	84	7.5	10,789	94	8.7
Wallace	2,147	19	8.8	2,452	23	9.3
Washington	17,348	154	8.9	17,104	161	9.4
Wichita	1,823	8	4.4	1,947	14	7.1
Wilson	21,439	245	11.4	21,273	210	9.8
Woodson	9,112	94	10.3	9,000	67	7.4
Wyandotte, except	12,151	159	13.1	12,313	152	12.3
Kansas City	101,233	1,479	14.6	102,736	1,260	12.2
Rosedale	7,872	131	16.7	7,888	110	13.9

TABLE No. 2. Showing comparison of death rates per 1,000 population, by counties, for the five-year period, 1917 to 1921, inclusive.

COUNTIES AND CITIES.	Death rate per 1,000 population.				
	1921.	1920.	1919.	1918.	1917.
STATE RATE	10.2	11.5	10.9	15.2	12.0
Allen, except	11.1	9.5	9.0	11.5	11.2
Iola	13.4	15.2	11.2	16.5	....
Anderson	12.2	11.7	9.9	11.8	10.7
Atchison, except	7.3	9.6	7.1	10.1	10.8
Atchison city	10.7	13.9	12.6	14.4	12.6
Barber	7.9	8.7	8.7	11.9	7.9
Barton, except	8.7	8.7	9.1	13.7	10.6
Great Bend	14.9	17.4	17.5	14.8	....
Bourbon, except	8.9	9.2	8.9	11.8	9.9
Fort Scott	13.5	13.9	12.6	18.5	13.3
Brown	10.4	9.4	8.1	11.4	10.9
Butler, except	5.4	5.8	5.4	8.1	12.1
Augusta	14.3	13.8	17.8	18.6	....
El Dorado	8.1	12.0	8.7	13.8	....
Chase	6.8	11.1	9.0	12.6	12.2
Chautauqua	10.7	12.6	9.4	10.6	10.7
Cherokee, except	9.3	12.5	12.3	16.7	15.5
Galena	13.7	11.7	18.1	21.3	....
Cheyenne	6.7	9.3	8.1	9.9	7.7
Clark	3.5	8.4	9.9	6.5	7.9
Clay	8.2	8.5	10.0	12.0	10.9
Cloud, except	9.3	9.9	8.2	12.1	11.9
Concordia	23.8	21.4	22.0	31.4	....
Coffey	9.3	9.0	9.7	10.4	10.2
Comanche	5.7	7.3	9.9	8.8	5.6
Cowley, except	10.1	8.4	8.6	16.0	13.6
Arkansas City	11.7	14.5	14.2	18.2	....
Winfield	13.7	17.9	15.9	24.3	....
Crawford, except	9.5	11.3	11.4	17.2	12.3
Pittsburg	8.8	7.8	10.3	15.1	11.6
Decatur	9.4	9.2	8.0	7.7	8.6
Dickinson	9.2	10.0	15.1	12.8	10.1
Doniphan	8.6	8.5	8.3	9.8	10.1
Douglas, except	8.0	9.0	7.1	13.4	11.2
Lawrence	13.3	13.1	11.6	15.1	13.6
Edwards	8.5	11.6	6.7	8.3	9.0
Elk	7.0	9.5	8.8	10.2	10.1
Ellis	12.0	12.6	11.4	14.3	11.1
Ellsworth	11.6	10.9	9.5	13.5	9.4
Finney	11.1	10.4	10.7	18.8	12.7
Ford, except	9.7	11.7	12.7	12.1	13.2
Dodge City	11.2	16.7	14.4	22.5	....
Franklin, except	8.1	9.9	6.4	11.9	13.6
Ottawa	11.6	15.1	14.5	15.5	....
Geary, except	6.1	9.2	18.6	....	31.0
Junction City	11.6	14.7	10.5	22.4	....
Gove	6.4	8.7	6.2	8.0	8.8
Graham	5.9	10.1	8.9	9.0	9.9
Grant	3.8	5.2	3.6	5.9	7.3
Gray	6.9	8.0	6.6	11.1	8.0
Greeley	5.4	5.2	3.3	3.9	8.0
Greenwood	9.0	8.0	9.4	11.5	10.4
Hamilton	11.2	11.4	15.7	11.9	11.6
Harper	7.9	10.4	9.0	10.1	8.4
Harvey, except	11.0	12.5	11.7	10.6	14.3
Newton	15.8	18.2	19.4	25.2	....
Haskell	6.7	7.6	7.2	6.4	9.8
Hodgeman	5.3	6.9	10.3	5.6	6.8
Jackson	10.5	10.0	10.4	13.0	11.7
Jefferson	9.0	8.2	8.8	12.7	11.5
Jewell	8.2	6.9	8.7	10.8	11.8
Johnson	11.7	11.6	11.0	15.0	12.5
Kearny	6.4	8.6	7.7	11.2	7.7
Kingman	8.8	10.3	10.4	11.0	9.5
Kiowa	6.0	9.3	6.5	8.0	7.2
Labette, except	12.6	15.9	15.6	18.9	14.6
Parsons	9.3	12.1	12.8	16.2	12.5
Lane	5.9	9.7	7.0	6.4	9.4
Leavenworth, except	20.8	21.4	22.7	35.8	28.0
Leavenworth city	12.2	12.7	12.5	17.5	15.8

TABLE No. 2—CONCLUDED.

COUNTIES AND CITIES.	Death rate per 1,000 population.				
	1921.	1920.	1919.	1918.	1917.
Lincoln	5.9	8.4	8.3	7.9	8.3
Linn	9.7	11.0	10.2	10.4	12.2
Logan	7.7	5.9	5.2	6.3	7.0
Lyon, except	7.8	9.2	7.8	9.8	11.5
Emporia	11.9	15.9	14.0	19.8	....
Marion	7.8	11.0	10.1	10.6	10.1
Marshall	8.5	10.2	9.4	11.9	8.9
McPherson	13.6	10.8	8.5	12.0	9.4
Meade	6.3	6.1	6.5	7.7	11.1
Miami	16.3	19.7	18.8	25.2	19.5
Mitchell	12.2	10.0	8.5	12.8	11.7
Montgomery, except	11.0	12.6	10.5	15.0	11.6
Coffeyville	11.0	12.7	10.6	17.2	14.2
Independence	10.6	13.1	12.1	18.3	13.6
Morris	7.9	8.5	10.7	11.6	8.8
Morton	5.5	7.8	8.5	19.5	4.9
Nemaha	7.5	8.8	9.5	12.1	8.3
Neosho, except	9.1	9.7	8.5	11.4	12.3
Chanute	15.0	15.7	13.9	21.0	....
Ness	7.7	7.0	6.9	7.7	11.3
Norton	11.1	10.9	9.7	11.3	10.9
Osage	9.0	10.3	9.1	10.9	10.7
Osborne	9.1	8.6	8.0	11.0	9.2
Ottawa	10.7	7.9	10.2	10.2	9.3
Pawnee	12.0	8.7	8.4	10.7	9.2
Phillips	7.8	9.7	9.3	8.5	8.7
Pottawatomie	9.3	11.1	9.4	14.3	9.6
Pratt	8.1	10.0	7.4	10.7	7.2
Rawlins	8.9	15.4	8.5	10.4	8.4
Reno, except	7.6	8.3	10.4	10.2	8.0
Hutchinson	9.6	12.3	11.0	17.2	12.2
Republic	8.1	9.7	10.3	10.9	8.1
Rice	10.3	10.9	9.5	14.6	10.6
Riley, except	6.7	8.7	7.5	10.1	12.5
Manhattan	12.5	11.9	12.6	19.6	....
Rooks	7.2	8.5	8.0	8.3	7.5
Rush	7.6	8.2	5.2	9.2	7.7
Russell	8.1	8.3	8.0	8.4	8.2
Saline, except	6.2	8.2	7.5	10.9	12.0
Salina	12.0	13.5	15.4	19.6	....
Scott	9.2	7.7	6.1	9.7	8.5
Sedgwick, except	6.6	7.2	7.6	9.0	10.4
Wichita	12.2	14.4	15.4	19.6	15.2
Seward	13.4	12.7	12.3	16.5	8.4
Shawnee, except	15.4	15.0	18.9	20.8	20.7
Topeka	14.2	15.2	16.2	20.8	16.8
Sheridan	8.2	8.8	7.6	6.8	8.1
Sherman	6.6	10.7	7.7	9.6	11.1
Smith	7.6	7.4	7.8	9.6	8.4
Stafford	7.7	12.0	9.3	12.8	7.8
Stanton	3.0	4.8	5.8	3.9	7.2
Stevens	7.1	6.3	10.4	8.1	9.7
Sumner, except	7.6	9.3	7.9	12.1	10.2
Wellington	12.1	18.6	15.4	22.9	....
Thomas	7.9	6.7	8.3	7.2	7.0
Trego	7.0	7.1	7.3	9.1	7.2
Wabaunsee	8.7	7.5	7.2	12.6	8.3
Wallace	9.3	8.8	10.6	13.1	9.5
Washington	9.4	8.9	8.3	11.3	8.8
Wichita	7.1	4.4	7.7	7.1	5.8
Wilson	9.8	11.4	9.4	13.6	12.7
Woodson	7.4	10.3	8.7	12.1	12.3
Wyandotte, except	12.3	13.1	12.0	17.9	17.5
Kansas City	12.2	14.6	14.7	22.3	15.4
Rosedale	13.9	16.7	14.3	27.4	....

TABLE No. 3A.—Showing total deaths, by counties, by months, 1920 (stillbirths not included).

COUNTIES AND CITIES.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
STATE TOTALS	1,821	3,328	1,989	1,559	1,453	1,392	1,427	1,397	1,369	1,375	1,501	1,695
Allen, except	13	24	17	8	5	10	16	7	14	11	16	16
Iola	15	17	11	8	8	9	18	9	9	10	10	13
Anderson	14	34	13	8	11	10	14	5	7	12	11	10
Atchison, except	7	30	13	4	6	7	6	7	3	8	4	9
Atchison city	27	44	21	18	14	9	8	12	11	7	19	16
Barber	6	7	7	7	4	4	9	9	8	6	8	7
Barton, except	12	22	13	10	7	6	9	6	7	9	6	12
Great Bend	5	10	4	5	12	10	5	8	5	6	13	1
Bourbon, except	6	24	8	5	8	7	8	4	7	12	10	15
Fort Scott	12	35	12	5	13	10	16	13	9	16	21	17
Brown	18	30	22	18	12	15	20	10	19	8	13	11
Butler, except	19	29	7	8	10	9	11	9	10	15	11	18
Augusta	2	13	4	4	8	3	4	4	5	5	2	4
El Dorado	18	24	12	10	12	8	7	5	9	8	16	7
Chase	4	7	8	6	9	8	4	3	4	6	5	6
Chautauqua	9	31	18	16	10	8	8	8	8	15	5	10
Cherokee, except	41	83	40	29	23	25	21	24	24	29	21	22
Galena	8	12	6	10	3	5	8	3	4	5	6	3
Cheyenne	3	7	3	7	1	4	....	5	1	4	3	8
Clark	1	11	3	1	....	1	2	3	3	....	1	1
Clay	11	17	16	15	21	7	11	2	1	10	12	11
Cloud, except	11	16	12	12	11	9	7	7	4	10	12	15
Concordia	8	9	9	5	10	11	6	10	6	8	8	12
Coffey	18	22	16	10	12	8	4	12	7	3	13	11
Comanche	1	5	5	6	1	2	3	....	1	3	8	3
Cowley, except	19	19	7	9	15	12	10	8	9	5	7	15
Arkansas City	18	16	13	11	8	8	17	12	15	16	17	17
Winfield	10	13	18	10	18	14	16	14	11	5	12	17
Crawford, except	40	91	61	30	31	24	39	27	34	29	41	39
Pittsburg	9	28	13	14	13	12	6	6	5	5	11	20
Decatur	7	21	8	5	3	4	3	5	7	1	4	6
Dickinson	18	41	27	18	21	21	21	23	19	18	14	22
Doniphan	12	17	14	15	12	16	11	7	4	8	5	9
Douglas, except	11	26	5	12	6	8	4	7	5	5	7	9
Lawrence	16	18	12	23	13	15	14	13	15	11	11	14
Edwards	7	16	5	8	4	5	6	4	6	5	5	7
Elk	8	19	8	8	4	4	6	5	6	5	8	13
Ellis	13	16	9	15	11	20	7	20	14	15	14	24
Ellsworth	12	13	14	13	5	4	6	9	7	11	8	8
Finney	7	14	7	6	3	2	6	8	7	4	9	8
Ford, except	13	27	10	14	7	12	4	10	1	3	5	8
Dodge City	8	9	9	6	4	5	4	8	7	8	13	5

Franklin, except	12	21	18	15	5	10	8	8	8	9	6	13
Ottawa	9	22	20	15	9	6	9	8	11	8	15	13
Geary, except	3	8	3	5	2	4	4	5	2	4	5	8
Junction City	10	16	10	6	3	4	7	6	10	11	3	9
Gove	3	14	5	4	2	......	2	1	4	3	1	5
Graham	1	15	9	1	7	7	6	14	3	......	8	5
Grant	......	......	......	......	......	2	1	......	......	......	1	2
Gray	4	1	3	1	3	2	2	3	1	8	2	4
Greeley	......	2	......	1	......	......	......	1	1	1	......	......
Greenwood	16	18	11	6	8	9	11	4	10	6	8	10
Hamilton	2	3	3	3	4	......	3	1	1	2	4	1
Harper	10	23	18	7	3	8	13	8	12	12	9	18
Harvey, except	14	22	12	9	9	11	8	12	8	10	9	14
Newton	16	35	18	13	10	16	7	16	13	20	12	13
Haskell	......	1	......	......	3	......	1	1	3	......	......	1
Hodgeman	2	4	2	2	2	......	4	2	2	3	2	1
Jackson	15	23	15	15	13	9	5	6	17	8	12	13
Jefferson	11	17	16	12	4	2	7	14	4	6	10	14
Jewell	10	15	15	9	7	10	4	4	5	7	7	15
Johnson	25	32	16	12	18	11	13	21	12	12	14	17
Kearny	4	......	1	1	......	4	1	2	3	2	......	4
Kingman	16	25	19	11	8	8	6	8	4	6	11	4
Kiowa	5	11	8	5	1	3	5	6	3	3	1	5
Labette, except	37	28	30	25	16	14	26	24	15	21	21	24
Parsons	19	25	14	23	18	16	13	12	12	13	13	21
Lane	1	9	1	3	2	......	1	......	2	......	4	2
Leavenworth, except	28	90	52	33	34	29	21	36	30	38	26	19
Leavenworth city	20	63	20	17	10	20	15	18	22	12	13	24
Lincoln	11	12	11	5	8	5	5	4	8	7	4	5
Linn	15	23	20	11	16	7	14	12	9	16	6	17
Logan	3	2	1	1	2	2	1	2	4	2	......	1
Lyon, except	14	19	11	10	9	8	4	10	14	4	16	17
Emporia	20	27	10	13	21	10	10	17	14	17	17	8
Marion	20	45	29	17	18	20	17	21	22	20	19	20
Marshall	19	25	20	15	21	15	18	14	20	10	14	20
McPherson	16	31	28	26	11	20	11	7	23	17	17	23
Meade	5	4	1	2	3	1	3	4	2	4	1	3
Miami	38	57	34	28	27	22	27	19	24	34	25	21
Mitchell	10	20	18	4	4	8	11	9	9	15	13	15
Montgomery, except	25	41	22	18	20	25	25	22	23	14	19	36
Coffeyville	19	24	23	11	13	23	10	11	16	15	20	25
Independence	8	24	24	11	11	16	10	14	5	9	19	15
Morris	8	9	14	8	8	13	6	7	6	3	12	8
Morton	4	2	3	3	......	1	2	2	......	5	1	3
Nemaha	17	33	18	17	16	10	13	10	10	5	6	8
Neosho, except	15	25	8	12	6	9	7	13	8	5	10	12
Chanute	9	28	17	8	8	13	10	19	19	13	10	13
Ness	6	13	3	4	5	1	4	1	3	3	4	3
Norton	11	17	14	12	8	14	8	6	12	3	8	9

TABLE No. 3A—CONCLUDED.

COUNTIES AND CITIES.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Osage	23	37	21	15	19	7	15	12	10	15	10	23
Osborne	11	14	14	10	6	5	4	9	9	10	8	8
Ottawa	9	7	14	4	7	8	7	6	6	6	10	5
Pawnee	8	14	8	6	4	3	8	5	5	4	5	8
Phillips	10	24	10	8	11	9	7	8	7	11	8	6
Pottawatomie	15	29	21	10	14	11	15	8	12	13	14	10
Pratt	15	17	13	6	7	10	9	12	6	8	11	11
Rawlins	8	35	14	8	3	3	4	4	3	3	5	8
Reno, except	30	34	13	13	9	13	11	17	10	5	16	10
Hutchinson	22	56	35	25	24	28	19	27	30	23	16	25
Republic	19	18	14	17	15	10	10	10	11	6	12	9
Rice	11	23	22	14	6	10	9	17	11	13	13	10
Riley, except	8	11	8	5	6	1	4	6	.....	13	7	14
Manhattan	10	15	11	5	5	5	5	8	7	6	9	3
Rooks	5	14	9	5	3	8	7	5	6	6	3	12
Rush	7	17	5	6	6	5	4	4	3	2	2	8
Russell	7	11	16	8	5	9	8	9	3	6	4	2
Saline, except	8	17	8	4	4	2	5	6	3	7	9	8
Salina	11	35	14	15	12	13	14	16	16	18	18	23
Scott	1	7	2	.....	.....	.....	4	2	.....	2	4	2
Sedgwick, except	15	20	14	12	8	9	12	11	9	12	10	15
Wichita	91	176	97	79	91	88	91	77	68	77	74	101
Seward	6	9	7	8	9	5	12	7	9	6	2	1
Shawnee, except	23	40	26	31	26	18	27	21	16	15	22	23
Topeka	69	98	68	67	73	68	59	54	53	48	55	52
Sheridan	4	9	2	3	3	6	4	4	2	2	6	4
Sherman	3	19	2	2	2	6	2	1	7	6	3	7
Smith	10	9	6	5	8	11	9	9	8	13	17	7
Stafford	12	24	16	14	6	8	8	10	13	6	9	11
Stanton	.....	2	.....	.....	.....	.....	1	.....	1	.....	.....	1
Stevens	.....	7	1	1	2	.....	3	.....	1	6	1	2
Sumner, except	14	35	18	8	10	15	20	9	16	14	26	17
Wellington	14	24	10	7	7	4	10	10	9	11	9	10
Thomas	3	8	5	1	2	1	1	4	2	3	4	2
Trego	2	9	4	4	5	1	3	2	4	1	4	4
Wabaunsee	7	19	5	7	6	11	8	5	3	5	2	6
Wallace	.....	3	2	2	3	1	1	.....	3	.....	3	1
Washington	11	6	18	12	16	9	7	8	14	13	22	8
Wichita	1	.....	1	2	.....	3	.....	.....	.....	.....	.....	1
Wilson	17	52	20	16	15	20	14	19	19	13	19	21
Woodson	8	18	9	9	6	4	5	8	5	9	6	7
Wyandotte, except	13	24	13	14	13	14	16	12	12	5	14	9
Kansas City	140	252	153	119	117	89	110	99	102	88	97	113
Rosedale	17	29	12	10	12	5	7	6	8	9	9	7

TABLE No. 3B.—Showing total deaths by counties, by months, 1921 (stillbirths not included).

COUNTIES AND CITIES.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
STATE TOTALS	1,725	1,550	1,635	1,493	1,449	1,257	1,552	1,426	1,317	1,606	1,542	1,692
Allen, except	9	23	22	12	22	10	17	6	11	18	15	19
Iola	11	8	9	5	9	17	12	9	15	4	7	13
Anderson	13	16	12	16	12	9	10	18	15	7	10	10
Atchison, except	3	10	6	8	7	6	8	6	6	10	5	9
Atchison city	7	14	18	15	21	14	13	9	13	12	15	13
Barber	10	6	8	5	5	4	4	8	3	5	9	7
Barton, except	11	4	15	8	10	13	11	14	15	4	8	7
Great Bend	4	10	6	5	6	6	7	7	3	6	3	12
Bourbon, except	11	9	11	12	11	6	6	5	13	11	12	7
Fort Scott	15	5	16	18	20	11	14	11	10	17	15	15
Brown	21	30	21	17	17	7	13	16	15	19	24	14
Butler, except	15	12	13	11	11	6	12	13	10	14	6	14
Augusta	8	8	4	3	8	2	3	4	5	4	5	8
El Dorado	9	6	7	8	7	6	13	4	14	3	5	10
Chase	5	2	6	3	5	2	10	2	0	3	4	4
Chautauqua	15	13	11	13	10	7	16	9	3	6	16	8
Cherokee, except	31	22	23	22	23	13	21	23	18	32	25	32
Galena	6	5	3	4	8	5	2	6	3	10	10	3
Cheyenne	4	2	5	3	1	5	3	4	2	2	7	1
Clark	1	4	3	1	2	1	1	1	0	0	1	2
Clay	22	8	12	3	9	8	4	12	10	16	12	13
Cloud, except	13	20	13	7	7	11	11	3	10	9	8	8
Concordia	10	14	12	14	9	5	7	6	7	5	6	15
Coffey	11	8	17	9	12	11	16	10	10	12	13	12
Comanche	2	0	1	6	3	1	0	4	3	4	2	3
Cowley, except	11	13	18	12	15	9	9	13	8	18	12	13
Arkansas City	18	6	8	12	10	11	20	10	8	8	11	13
Winfield	14	10	8	13	11	10	5	12	3	18	10	8
Crawford, except	34	37	36	39	25	22	34	42	24	37	41	35
Pittsburg	12	10	17	8	12	13	16	14	10	18	15	16
Decatur	5	5	13	3	5	9	5	5	8	4	8	6
Dickinson	24	26	24	24	14	12	22	19	18	17	15	21
Doniphan	15	13	7	6	16	6	9	15	10	12	11	12
Douglas, except	7	11	12	6	12	6	6	5	3	6	6	13
Lawrence	24	17	20	13	14	13	13	13	14	19	12	8
Edwards	6	3	7	5	1	4	5	3	6	5	5	5
Elk	2	7	6	2	5	8	7	8	1	7	11	8
Ellis	16	15	15	15	15	8	6	10	19	15	15	17
Ellsworth	16	14	7	16	6	13	8	10	5	7	3	14
Finney	10	7	4	6	5	6	9	8	4	8	7	9
Ford, except	12	7	5	8	3	3	10	9	12	5	11	4
Dodge City	7	5	7	3	7	3	9	5	6	8	4	4

TABLE No. 3B—Concluded.

Counties and Cities.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Franklin, except	9	10	12	7	7	8	8	10	7	11	5	10
Ottawa	7	10	8	5	6	10	11	8	12	16	7	11
Geary, except	3	4	1	1	4	3	8	2	2	5	0	6
Junction City	7	5	5	11	8	7	5	7	9	5	7	6
Gove	3	1	3	3	3	3	1	3	2	4	3	4
Graham	3	1	1	6	3	4	3	5	3	7	5	3
Grant	1	0	0	0	0	0	0	0	1	0	1	2
Gray	2	5	6	1	4	2	2	1	2	3	1	3
Greeley	0	0	1	1	0	0	1	0	0	1	1	1
Greenwood	7	16	11	16	8	18	9	11	9	10	11	11
Hamilton	3	3	2	1	1	3	5	3	1	5	1	0
Harper	10	6	5	12	14	4	7	11	7	8	15	8
Harvey, except	13	7	9	10	5	11	8	14	10	12	10	10
Newton	16	17	16	16	10	9	15	17	13	8	12	6
Haskell	3	1	1	3	0	0	0	0	0	2	0	1
Hodgeman	7	1	0	0	2	0	2	1	0	1	4	1
Jackson	16	14	8	12	17	12	15	11	12	14	11	17
Jefferson	11	8	13	15	6	9	13	7	14	9	10	12
Jewell	7	8	14	13	10	10	8	20	7	10	7	13
Johnson	11	13	16	18	21	18	17	17	16	22	17	24
Kearny	2	1	1	2	1	1	2	0	2	0	3	1
Kingman	8	11	9	6	13	8	12	7	6	4	9	11
Kiowa	4	3	3	4	6	1	6	4	2	2	2	5
Labette, except	20	17	21	20	18	20	15	19	16	39	7	12
Parsons	16	8	11	15	14	16	13	12	11	15	13	20
Lane	0	1	4	0	0	1	1	2	2	1	2	2
Leavenworth, except	34	40	38	30	36	36	36	33	24	42	46	41
Leavenworth city	21	23	21	15	17	21	27	13	14	29	22	21
Lincoln	8	2	6	4	1	4	5	7	5	4	9	4
Linn	16	18	12	13	14	9	10	6	10	12	14	13
Logan	2	2	3	3	2	3	4	3	3	1	1	1
Lyon, except	12	9	11	12	10	8	6	10	7	13	7	8
Emporia	13	11	13	11	14	13	17	9	5	11	10	16
Marion	20	13	17	25	13	16	18	23	10	15	16	15
Marshall	25	23	13	15	12	15	15	12	12	8	19	22
McPherson	16	24	24	15	15	22	13	14	12	20	11	23
Meade	1	5	5	3	3	2	4	3	1	2	1	4
Miami	35	20	22	23	20	19	22	27	28	28	33	29
Mitchell	18	18	15	13	16	14	9	11	14	13	13	15
Montgomery, except	21	19	29	21	12	22	30	21	16	28	27	26
Coffeyville	12	13	15	18	10	19	18	15	10	18	17	13
Independence	23	12	10	9	18	5	12	9	8	8	8	12
Morris	8	9	5	11	5	5	11	12	9	7	6	8
Morton	1	0	7	0	0	3	2	3	1	0	0	1

Nemaha	7	11	13	11	10	11	14	10	13	14	14	11
Neosho, except	10	10	9	11	6	7	5	8	15	12	9	16
Chanute	19	9	13	23	12	12	14	11	6	14	17	16
Ness	8	1	1	1	8	6	4	8	6	7	2	6
Norton	12	7	15	6	5	6	14	8	7	16	15	17
Osage	10	7	18	17	21	15	18	12	15	25	11	12
Osborne	6	10	8	11	9	4	12	13	11	3	16	11
Ottawa	9	8	10	8	8	9	16	14	7	5	8	11
Pawnee	7	8	7	10	10	11	16	9	4	6	13	10
Phillips	13	15	5	6	4	8	5	10	9	3	9	13
Pottawatomie	13	13	13	9	17	7	11	11	12	9	14	12
Pratt	9	10	5	5	10	4	16	11	5	7	7	15
Rawlins	3	10	7	5	5	2	5	2	4	2	2	10
Reno, except	16	12	16	6	15	13	12	13	10	20	11	16
Hutchinson	30	22	22	15	20	13	32	20	22	23	19	22
Republic	12	15	6	15	6	9	8	12	8	15	14	9
Rice	18	14	21	12	15	11	10	8	11	9	7	9
Riley, except	10	8	7	3	6	3	3	10	4	4	6	1
Manhattan	8	3	8	9	10	6	4	3	5	10	8	10
Rooks	3	4	6	10	7	8	5	5	4	6	6	10
Rush	10	8	4	4	2	2	5	5	2	2	9	9
Russell	8	8	6	9	7	5	7	9	9	7	4	9
Saline, except	14	2	6	4	1	2	8	3	5	6	4	5
Salina	14	21	15	14	13	19	22	10	10	17	12	19
Scott	6	4	2	0	3	1	3	3	2	3	2	2
Sedgwick, except	10	9	12	15	8	8	11	5	9	9	12	12
Wichita	95	77	88	81	67	69	86	78	82	71	92	88
Seward	13	5	6	7	8	6	5	9	4	9	5	7
Shawnee, except	33	28	23	29	26	17	26	15	22	32	29	34
Topeka	74	67	67	56	58	38	52	53	64	70	62	65
Sheridan	9	9	10	3	1	1	3	3	4	2	1	3
Sherman	3	6	5	4	3	1	2	5	2	3	1	3
Smith	10	11	7	5	9	12	11	8	4	12	9	17
Stafford	9	4	9	6	6	6	9	9	4	5	10	10
Stanton	0	0	0	1	0	0	0	0	1	0	0	1
Stevens	0	5	1	3	4	0	1	3	1	3	4	4
Sumner, except	16	14	14	18	12	14	11	6	14	16	12	14
Wellington	7	10	5	7	8	8	3	9	5	7	4	11
Thomas	4	3	3	2	10	1	5	2	4	3	5	4
Trego	1	6	5	5	7	0	2	8	1	2	3	3
Wabaunsee	11	9	7	9	12	7	10	4	6	4	4	11
Wallace	1	3	1	0	3	1	1	5	3	1	2	2
Washington	18	15	13	10	12	10	14	10	12	15	17	15
Wichita	2	0	2	1	1	1	2	0	1	2	0	2
Wilson	18	16	22	20	17	15	15	18	19	20	14	16
Woodson	6	3	9	3	2	4	5	7	5	6	10	7
Wyandotte, except	10	13	12	14	8	10	11	7	12	21	12	22
Kansas City	128	98	125	101	96	75	94	94	96	116	122	115
Rosedale	5	12	11	11	11	3	11	6	8	14	10	8

TABLE No. 4.—Showing number of deaths and death rate per 100,000 population for certain diseases by counties, 1920 and 1921.

COUNTIES AND CITIES.	Typhoid fever.				Measles.				Scarlet fever.				Whooping cough.			
	1920.		1921.		1920.		1921.		1920.		1921.		1920.		1921.	
	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.
STATE TOTALS	141	7.9	154	8.5	83	4.6	78	4.3	100	5.5	111	6.1	211	11.7	105	5.8
Allen, except	2	12.0	7	42.3							2	12.1				
Iola					1	11.0					1	11.3	2	22.0		
Anderson	3	23.8			4	31.5			2	15.8	4	32.5	2	15.8		
Atchison, except									2	18.6						
Atchison city	1	6.7	2	13.0					1	6.7			2	13.5	1	6.5
Barber			1	10.8					1	11.0			3	32.0		
Barton, except	2	14.7	1	7.3			1	7.3	1	7.3	1	7.3			3	22.0
Great Bend	5	101.0	1	19.9												
Bourbon, except	1	8.0					2	15.7	2	16.2					3	23.6
Fort Scott	2	15.5	2	16.1			1	8.0					1	7.8		
Brown			1	4.9	1	4.8					1	4.9			1	4.9
Butler, except	4	14.8	2	7.7	1	3.7							1	3.7	1	3.9
Augusta			1	23.0							1	23.0	1	24.0	1	23.0
El Dorado	3	26.6	3	16.4					1	8.8			1	8.8		
Chase	1	15.9	1	14.8					2	31.9			4	63.7		
Chautauqua	2	17.2	2	16.9												
Cherokee, except	7	23.0	2	6.5	6	19.7			5	16.4	1	13.3	4	13.2		
Galena	2	42.0	2	42.4												
Cheynne					1	17.4					1	17.3	1	17.4		
Clark																
Clay									1	6.4	3	19.2	3	19.1	3	19.2
Cloud, except	1	7.8	1	7.7					2	15.7	1	7.7			1	7.7
Concordia	1	21.0									1	21.5				
Coffey	4	26.6	4	26.6			1	6.6	1	6.6						
Comanche					1	19.4			1	19.4			1	19.4		
Cowley, except			1	6.7	1	6.2	1	6.7			1	6.7	2	12.4	1	6.7
Arkansas City							1	8.7	1	8.6					1	8.7
Winfield	1	11.3			3	34.0							3	34.0		
Crawford, except	9	20.8	8	18.7					2	4.6	1	2.3	1	2.3		
Pittsburg	1	5.5	3	16.6							2	11.0	1	5.5	2	11.0
Decatur																
Dickinson	2	7.6	1	3.9					3	11.3	3	11.8	3	11.3	2	7.9
Doniphan							1	6.5	1	6.5						
Douglas, except			1	8.6					1	8.5						
Lawrence			2	14.8					2	15.1	1	7.4			3	22.2
Edwards	1	14.8					2	29.4	2	29.6	2	29.4				
Elk			2	19.5											1	9.7
Ellis			1	6.7	1	7.0	6	40.6	1	7.0			2	14.1	3	20.3
Ellsworth					1	9.9	1	9.8			1	9.8	1	9.9	1	9.8

Finney	2	25.8	3	40.2	1	12.9							2	25.8		
Ford, except			1	10.9	1	10.1			2	20.3	1	10.9	2	20.3	1	10.9
Dodge City			2	33.1					1	19.5			1	19.5		
Franklin, except									1	7.4	1	7.8	3	22.3		
Ottawa	1	10.4			1	10.4										
Geary, except									1	17.4						
Junction City									1	15.5	1	14.1	3	46.5	1	14.1
Gove			1	19.6												
Graham											1	13.3				
Grant			1	76.6												
Gray	1	23.4					1	21.5	3	70.5			1	23.4		
Greeley																
Greenwood					2	13.6							3	20.4	1	6.5
Hamilton																
Harper			3	22.2			1	7.4			1	7.4	3	22.2		
Harvey, except	1	93.0	1	9.2											2	18.4
Newton			1	10.2			1	10.2			1	10.2				
Haskell			2	123.4					1	76.8					1	61.7
Hodgeman																
Jackson	1	6.6			1	6.6	1	6.6								
Jefferson					2	14.0										
Jewell											4	25.8	4	25.5	1	6.4
Johnson			2	11.2					1	5.7	1	5.6	3	17.1	1	5.6
Kearny																
Kingman	2	16.4	1	8.5	1	8.2							1	8.2	1	8.5
Kiowa											1	16.4	3	49.8		
Labette, except			5	25.3	1	5.6							3	16.6	1	5.0
Parsons	4	23.6							1	5.9	2	11.4	2	11.8	1	5.7
Lane																
Leavenworth, except	1	4.8	1	4.8									1	4.8		
Leavenworth city							1	5.0			3	15.0	2	10.0		
Lincoln									1	10.0			1	10.0	2	19.9
Linn	3	19.9	1	6.6			2	13.2	1	6.6	3	19.7	2	13.3		
Logan																
Lyon, except							1	6.9	4	27.0			2	13.5		
Emporia	1	8.7	1	8.3	2	17.4							2	17.4		
Marion			2	7.6			1	3.8	2	8.2	1	3.8	5	20.3	1	3.8
Marshall	1	4.2			2	8.5	1	4.4	2	8.5	3	13.3			2	8.9
McPherson									2	9.3	3	14.2	2	9.3	2	9.4
Meade	1	18.4	1	18.7			1	18.7	1	18.4						
Miami	2	11.1	3	16.0	3	16.6					4	21.3	4	22.2	1	5.3
Mitchell	1	7.3	1	7.6			1	7.6			1	7.6	2	14.7	1	7.6
Montgomery, except	5	21.0	3	12.2	4	16.8	1	4.0			2	8.1	4	16.8	3	12.2
Coffeyville	1	7.9	5	31.1	7	55.0	2	12.4					1	7.0		
Independence	2	12.0	1	7.9									5	30.1		
Morris	2	16.7			1	8.3					2	16.6	2	16.7	1	8.3
Morton	1	29.3					2	61.9	2	58.6						
Nemaha	4	22.0	2	10.8					2	11.0			4	22.0	1	5.4
Neosho, except	1	7.4	1	7.7			1	7.7	2	14.9						
Chanute	2	18.8	2	18.0			3	27.0							4	36.1
Ness			3	40.2			1	13.4			1	13.4			2	26.8
Norton			1	8.7							6	52.2			1	8.7
Osage	1	4.9			1	4.9			2	9.9			1	4.9	2	9.9

TABLE No. 4—CONTINUED. Deaths and death rates, certain diseases, 1920 and 1921.

COUNTIES AND CITIES.	Typhoid fever.				Measles.				Scarlet fever.				Whooping cough.			
	1920.		1921.		1920.		1921.		1920.		1921.		1920.		1921.	
	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.
Osborne	1	7.9	......	......	......	......	3	23.5	......	......	......	......	3	24.0	1	7.8
Ottawa	......	......	......	......	......	......	1	9.4	1	9.4	......	......	......	......	......	......
Pawnee	1	11.2	2	23.1	......	......	1	11.5	1	11.2	1	11.5	......	......	......	......
Phillips	1	8.1	......	......	......	......	......	......	2	16.3	3	23.5	1	8.1	......	......
Pottawatomie	......	......	1	6.5	......	......	1	6.5	2	12.9	1	6.5	2	12.9	......	......
Pratt	......	......	......	......	1	7.9	......	......	1	7.9	1	7.8	2	15.9	1	7.8
Rawlins	1	15.8	......	......	......	......	1	15.7	2	31.3	1	15.7	1	15.8	3	47.0
Reno, except	1	4.6	2	9.6	......	......	1	4.8	1	4.6	......	......	4	18.4	......	......
Hutchinson	4	14.9	1	3.4	1	3.7	1	3.4	1	3.7	1	3.4	9	33.3	......	......
Republic	......	......	2	12.6	......	......	......	......	......	......	1	6.3	2	12.9	1	6.3
Rice	......	......	2	14.3	......	......	......	......	......	......	2	14.3	......	......	......	......
Riley, except	1	10.0	1	10.4	......	......	......	......	......	......	......	......	1	10.0	......	......
Manhattan	......	......	......	......	......	......	......	......	......	......	2	29.8	2	26.7	......	......
Rooks	......	......	1	9.8	1	10.2	3	29.5	1	10.2	2	19.7	......	......	......	......
Rush	1	11.9	1	12.3	1	11.9	......	......	......	......	1	12.3	2	23.8	1	12.3
Russell	......	......	1	9.1	......	......	3	27.3	......	......	......	......	......	......	1	9.1
Saline, except	......	......	......	......	......	......	1	10.2	1	10.1	1	10.2	......	......	......	......
Salina	4	26.5	1	6.5	......	......	4	26.0	1	6.6	2	13.0	......	......	1	6.5
Scott	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
Sedgwick, except	1	4.9	......	......	2	9.8	1	5.0	1	4.9	1	5.0	1	4.9	......	......
Wichita	7	9.1	16	20.1	2	2.5	8	10.0	3	3.8	6	7.5	5	6.5	6	7.5
Seward	1	15.8	......	......	......	......	......	......	2	31.6	1	15.9	3	47.2	1	15.9
Shawnee, except	1	5.2	......	......	......	......	1	4.9	2	10.4	......	......	......	......	1	4.9
Topeka	7	14.0	5	10.1	1	1.9	6	12.1	......	......	2	4.0	15	30.0	......	......
Sheridan	......	......	......	......	......	......	1	17.6	......	......	3	52.9	1	18.1	......	......
Sherman	......	......	......	......	......	......	......	......	......	......	......	......	1	17.7	......	......
Smith	1	6.6	2	13.3	......	......	......	......	......	......	......	......	1	6.6	1	6.6
Stafford	1	8.7	3	26.6	......	......	......	......	2	17.5	......	......	1	8.7	3	26.6
Stanton	......	......	......	......	......	......	......	......	......	......	......	......	1	99.9	......	......
Stevens	......	......	......	......	......	......	......	......	......	......	......	......	1	26.0	......	......
Sumner, except	......	......	......	......	......	......	......	......	......	......	......	......	2	9.2	......	......
Wellington	2	29.8	1	14.4	......	......	......	......	1	14.8	......	......	......	......	1	14.4
Thomas	......	......	......	......	......	......	......	......	......	......	1	17.1	......	......	2	34.3
Trego	......	......	......	......	......	......	......	......	......	......	......	......	1	16.6	......	......
Wabaunsee	......	......	1	9.2	......	......	1	9.2	......	......	......	......	......	......	......	......
Wallace	......	......	......	......	......	......	......	......	......	......	......	......	1	49.2	1	40.8
Washington	......	......	......	......	2	11.5	......	......	1	5.7	3	17.5	4	23.0	1	5.8
Wichita	......	......	......	......	......	......	......	......	......	......	......	......	......	......	1	51.3
Wilson	2	9.3	3	14.1	2	9.3	......	......	1	4.6	1	4.7	3	14.0	......	......
Woodson	1	9.5	2	22.2	......	......	1	11.1	1	9.5	......	......	1	9.5	1	11.1
Wyandotte, except	......	......	......	......	......	......	......	......	......	......	2	16.2	2	16.4	......	......
Kansas City	6	5.9	6	5.8	18	17.7	......	......	4	3.9	......	......	23	22.7	14	13.6
Rosedale	......	......	......	......	1	12.7	......	......	......	......	1	12.7	2	25.2	......	......

TABLE No. 4—CONTINUED. Deaths and death rates, certain diseases, 1920 and 1921.

COUNTIES AND CITIES.	Diphtheria.				Tuberculosis (all forms).				Cancer (all forms).				Diabetes.			
	1920.		1921.		1920.		1921.		1920.		1921.		1920.		1921.	
	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.
STATE TOTALS	264	14.6	382	21.4	869	49.0	778	43.4	1,267	70.0	1,407	78.5	265	14.7	284	15.8
Allen, except	6	36.4	5	36.3	6	36.4	12	72.5	5	30.2	9	54.5	2	12.0	2	12.2
Iola	4	44.0	4	45.7	10	110.0	4	45.7	9	100.0	6	67.5	1	11.0	1	11.2
Anderson	1	8.0	4	32.5	6	47.5	4	32.5	5	39.4	9	73.4	2	15.8	1	8.1
Atchison, except	......	......	1	8.5	6	55.5	4	35.0	3	27.9	9	78.5	3	27.9	2	17.5
Atchison city	1	6.7	6	39.4	10	74.0	10	72.0	17	114.0	19	124.5	6	40.5	6	39.3
Barber	1	11.0	......	......	2	21.2	1	10.8	3	32.0	10	119.0	1	11.0	2	21.6
Barton, except	1	7.3	2	14.6	2	14.7	4	29.0	11	81.0	8	58.0	4	29.2	1	7.2
Great Bend	1	17.4	......	......	1	17.4	1	19.5	6	108.0	6	118.5	1	17.4	4	79.0
Bourbon, except	3	24.0	4	31.4	3	24.0	2	15.7	7	56.5	12	94.0	3	24.0	1	7.8
Fort Scott	6	46.5	7	56.5	4	31.0	8	64.7	10	77.5	17	138.0	3	23.5	2	16.2
Brown	1	4.8	......	......	10	48.0	8	39.1	9	43.5	18	88.0	1	4.8	3	14.7
Butler, except	4	14.8	6	23.3	4	14.8	5	19.4	2	7.4	10	42.5	4	14.8	2	7.7
Augusta	2	48.0	1	23.0	1	24.0	4	92.0	2	48.0	4	92.0	......	......	1	23.0
El Dorado	6	53.0	7	62.0	7	62.0	3	26.6	4	35.2	3	26.6	1	8.8	2	17.7
Chase	......	......	......	......	1	15.9	......	......	7	111.5	4	58.0	......	......	1	14.7
Chautauqua	6	52.0	1	8.3	5	43.0	4	33.8	5	43.0	6	50.5	......	......	2	16.6
Cherokee, except	11	36.2	12	39.4	23	75.7	13	42.5	12	39.4	18	59.0	6	19.7	2	6.5
Galena	1	21.0	......	......	4	83.5	8	170.0	2	42.0	2	42.5	2	42.0	......	......
Cheyenne	......	......	2	34.6	1	17.4	1	17.3	1	17.4	2	34.6	1	17.4	1	17.3
Clark	1	19.9	......	......	2	39.8	1	20.4	......	......	1	20.4	......	......	......	......
Clay	......	......	1	6.3	......	......	2	12.8	21	134.0	7	44.7	5	31.8	3	19.2
Cloud, except	1	7.8	1	7.7	3	23.6	4	31.0	8	63.0	12	93.0	4	31.4	6	46.5
Concordia	1	21.0	......	......	3	63.0	4	86.5	7	147.0	5	107.5	......	......	4	86.5
Coffey	2	13.1	3	19.9	6	39.2	2	13.3	13	85.0	20	133.0	......	......	1	6.7
Comanche	1	19.4	......	......	1	19.4	1	19.7	1	19.4	4	79.0	1	19.4	1	19.7
Cowley, except	......	......	3	20.0	6	37.4	7	47.0	6	37.4	11	73.7	3	18.6	3	20.0
Arkansas City	3	25.8	3	26.0	9	77.5	2	17.3	9	77.5	11	95.5	3	25.8	2	17.3
Winfield	1	11.3	1	10.4	9	102.0	8	84.5	16	181.0	10	123.0	2	22.6	4	33.6
Crawford, except	12	27.8	12	28.0	12	27.8	21	49.0	20	46.4	22	51.5	5	11.6	3	7.0
Pittsburg	2	11.0	6	32.2	4	22.0	9	49.7	11	60.5	22	121.5	3	16.5	......	......
Decatur	......	......	1	12.4	3	37.5	1	12.4	6	75.0	5	62.0	1	12.5	3	37.1
Dickinson	2	7.6	1	3.9	6	22.6	9	35.4	18	67.6	20	79.0	2	7.6	3	10.8
Doniphan	......	......	1	6.5	2	13.1	6	39.2	9	59.0	13	85.0	......	......	1	6.5
Douglas, except	2	17.2	1	8.6	4	34.2	3	25.4	7	60.0	9	77.5	2	17.2	5	43.0
Lawrence	1	7.5	7	51.7	13	98.0	8	59.0	13	98.0	16	118.0	1	7.5	1	7.5
Edwards	1	14.8	......	......	1	14.8	......	......	4	59.4	3	44.0	2	29.6	......	......
Elk	......	......	1	9.7	4	38.6	4	39.0	6	58.0	6	58.5	1	9.6	......	......
Ellis	6	42.2	5	33.8	4	28.2	9	61.0	9	63.5	8	54.0	4	28.2	4	27.0
Ellsworth	......	......	1	9.8	3	29.0	5	49.0	9	89.4	18	177.0	3	29.0	4	39.3

TABLE No. 4—Continued. Deaths and death rates, certain diseases, 1920 and 1921.

Counties and Cities.	Diphtheria.				Tuberculosis (all forms).				Cancer (all forms).				Diabetes.			
	1920.		1921.		1920.		1921.		1920.		1921.		1920.		1921.	
	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.
Finney	2	25.8	1	13.4	4	51.7	4	53.5	2	25.8	3	40.0	1	12.9	......	......
Ford, except	1	10.1	3	32.6	1	10.1	7	76.5	2	20.3	4	43.5	1	10.1	2	21.6
Dodge City	3	58.5	3	49.5	3	58.5	2	33.0	6	117.0	5	82.7	......	......	1	16.5
Franklin, except	......	......	2	15.7	5	37.2	5	39.1	6	44.5	11	87.0	1	7.4	3	23.4
Ottawa	1	10.4	7	73.5	10	104.0	4	42.0	11	115.0	8	84.0	2	21.0	2	21.0
Geary, except	......	......	......	......	8	139.0	......	......	3	52.2	3	47.5	1	17.4	1	15.8
Junction City	4	62.0	1	14.1	3	46.5	5	70.7	6	93.0	5	70.7	......	......	3	42.4
Gove	1	20.0	2	39.0	1	20.0	......	......	2	40.0	......	......	......	......	......	......
Graham	1	13.3	3	40.0	2	26.6	3	40.0	4	53.4	3	40.0	1	13.3	......	......
Grant	......	......	......	......	......	......	......	......	1	89.5	......	......	......	......	......	......
Gray	......	......	2	43.0	......	......	......	......	3	70.5	......	......	......	......	......	......
Greeley	......	......	......	......	1	88.0	......	......	......	......	......	......	......	......	2	176.0
Greenwood	......	......	2	13.1	5	34.4	4	26.2	12	81.8	18	118.0	2	13.6	4	26.2
Hamilton	......	......	......	......	1	42.0	1	40.0	2	84.0	1	40.0	......	......	......	......
Harper	2	14.7	5	37.2	8	59.0	2	14.8	9	66.5	12	89.0	2	14.7	1	7.4
Harvey, except	......	......	......	......	6	55.5	3	27.6	18	167.0	11	102.0	4	37.0	2	18.4
Newton	3	33.0	......	......	8	82.0	4	40.8	12	123.0	11	113.0	3	33.0	3	30.6
Haskell	1	76.8	......	......	......	......	......	......	1	76.8	1	61.5	......	......	......	......
Hodgeman	......	......	......	......	2	53.2	......	......	2	53.2	1	28.2	1	26.6	......	......
Jackson	1	6.6	3	19.8	9	60.0	7	46.2	12	80.0	23	152.0	......	......	3	19.8
Jefferson	1	7.0	3	21.4	3	21.0	5	35.6	4	28.0	5	35.6	2	14.0	2	14.2
Jewell	1	6.3	1	6.4	3	19.0	1	6.4	4	25.5	17	110.0	1	6.3	3	19.4
Johnson	......	......	9	50.0	6	34.2	10	61.5	14	79.5	13	72.5	1	5.7	1	5.6
Kearny	......	......	......	......	1	39.5	......	......	3	118.5	......	......	1	39.5	......	......
Kingman	1	8.2	1	8.5	4	32.8	6	51.0	2	16.4	7	59.7	3	24.6	2	17.1
Kiowa	......	......	1	16.4	1	16.6	1	16.4	5	83.0	......	......	......	......	1	16.4
Labette, except	4	22.2	5	28.2	18	100.0	12	63.0	20	110.8	19	107.0	5	27.7	1	5.6
Parsons	2	11.8	3	17.0	7	41.3	11	63.0	14	82.5	9	51.2	1	5.9	......	......
Lane	......	......	1	37.0	1	38.6	1	37.0	......	......	1	37.0	......	......	......	......
Leavenworth, except	1	4.8	10	52.7	2	9.6	13	62.2	17	82.0	25	120.0	6	28.9	6	28.8
Leavenworth city	2	10.0	13	65.0	19	95.5	9	45.0	14	70.0	24	119.5	3	15.0	1	4.9
Lincoln	......	......	......	......	2	20.0	2	20.0	7	70.0	6	60.0	......	......	4	40.0
Linn	3	19.9	1	6.6	6	39.9	6	39.6	5	33.2	17	112.0	......	......	1	6.6
Logan	......	......	......	......	......	......	1	27.5	1	28.4	2	55.0	......	......	1	27.5
Lyon, except	......	......	3	20.7	2	13.5	3	20.7	12	81.2	4	27.6	......	......	2	13.8
Emporia	......	......	4	33.2	10	86.5	3	24.9	16	138.5	10	91.5	7	60.7	2	16.6
Marion	5	20.3	......	......	10	41.0	6	23.1	13	53.5	16	61.5	7	28.8	4	15.8
Marshall	1	4.2	3	13.7	5	21.3	5	22.2	18	76.5	17	75.6	1	4.2	8	35.6
McPherson	2	9.3	4	18.4	8	37.4	5	23.0	17	79.5	17	78.5	3	14.1	4	18.4
Meade	......	......	......	......	3	55.4	1	8.7	2	37.0	1	8.7	......	......	......	......
Miami	3	16.6	3	16.0	25	138.5	21	112.0	15	83.0	21	112.0	1	5.5	4	21.3
Mitchell	......	......	......	......	3	22.0	1	7.6	12	88.5	8	61.0	3	22.0	6	46.0

Montgomery, except	10	42.0	17	69.0	17	71.5	13	52.7	13	54.8	18	73.0	4	16.8	7	28.4
Coffeyville	3	23.3	4	31.8	22	174.0	7	55.7	15	118.5	9	71.5	1	7.9	2	15.9
Independence	4	24.1	3	18.7	10	60.2	8	50.0	7	42.1	9	56.0	3	18.1	......	......
Morris	......	......	4	33.0	5	41.7	5	41.5	9	75.0	7	58.0	3	25.0	......	......
Morton	1	29.3	......	......	1	29.3	......	......	1	29.3	2	61.5	......	......	1	30.8
Nemaha	4	22.0	4	21.7	2	11.0	2	8.5	14	76.0	13	70.5	2	11.0	3	16.5
Neosho, except	3	22.3	1	7.7	3	22.3	7	54.0	7	52.0	9	69.5	3	22.3	2	15.8
Chanute	1	9.4	5	45.0	8	75.0	12	108.5	11	103.5	14	126.5	1	9.4	1	9.0
Ness	2	28.0	1	13.4	......	......	2	26.7	5	70.0	5	67.0	1	14.0	......	......
Norton	1	8.9	3	26.2	11	97.5	14	122.0	11	97.5	7	61.0	1	8.9	1	8.7
Osage	......	......	5	24.9	5	24.9	6	29.9	15	74.5	19	94.7	6	29.9	2	9.9
Osborne	......	......	......	......	1	7.9	2	15.7	7	51.8	11	87.0	1	7.9	1	7.8
Ottawa	1	9.4	1	9.4	1	9.4	......	......	5	47.5	12	113.5	3	28.4	1	9.4
Pawnee	......	......	3	34.6	2	22.4	1	11.5	4	44.8	5	57.7	......	......	2	23.0
Phillips	......	......	1	7.8	3	24.5	2	15.7	13	106.0	6	47.0	2	16.3	5	39.2
Pottawatomie	4	25.8	1	6.6	8	51.6	4	26.4	10	64.5	10	72.5	2	12.9	3	19.7
Pratt	1	8.0	2	15.6	5	39.9	5	39.0	6	47.8	9	70.0	1	8.0	4	31.2
Rawlins	5	79.0	......	......	1	15.8	......	......	3	47.3	3	47.0	2	31.6	......	......
Reno, except	3	13.8	4	19.3	7	32.2	3	14.3	7	32.2	15	71.5	1	4.6	1	4.7
Hutchinson	2	7.4	10	40.0	10	37.2	10	40.0	21	78.2	17	62.0	......	......	4	14.8
Republic	2	12.9	2	12.5	4	25.8	1	6.2	11	71.0	16	100.5	1	6.9	2	12.5
Rice	1	6.8	3	21.4	2	13.6	5	35.7	14	95.7	9	54.4	2	13.6	......	......
Riley, except	......	......	......	......	3	37.5	1	10.4	8	84.0	7	72.8	1	10.0	......	......
Manhattan	......	......	......	......	3	40.0	2	29.8	5	66.8	7	104.0	2	26.7	1	14.8
Rooks	......	......	......	......	2	20.2	1	9.8	7	71.7	3	29.6	......	......	......	......
Rush	1	11.9	......	......	1	11.9	1	12.3	5	59.5	5	61.5	......	......	......	......
Russell	......	......	3	27.3	2	18.9	......	......	2	18.9	5	40.0	......	......	3	27.3
Saline, except	1	10.1	......	......	1	10.1	1	10.2	......	......	3	30.6	3	30.3	1	10.2
Salina	6	38.6	4	26.0	13	86.0	4	26.0	14	92.5	13	84.5	3	19.8	4	26.0
Scott	......	......	1	29.7	......	......	1	29.7	1	31.7	......	......	......	......	1	29.7
Sedgwick, except	2	9.8	5	25.4	3	14.7	1	5.0	6	29.4	5	25.4	3	14.7	......	......
Wichita	18	23.4	23	28.8	49	63.5	38	47.7	89	115.2	96	120.1	6	7.7	14	17.6
Seward	2	31.6	1	15.9	5	79.0	2	31.8	5	79.0	2	31.8	......	......	1	15.9
Shawnee, except	2	10.4	8	39.2	23	120.0	30	147.0	13	68.0	16	78.5	2	10.4	2	9.8
Topeka	1	1.9	13	26.2	42	84.0	35	70.5	67	134.0	62	125.0	17	34.0	11	22.3
Sheridan	......	......	......	......	......	......	1	17.6	3	54.5	2	35.3	......	......	......	......
Sherman	......	......	......	......	1	17.7	3	52.4	......	......	2	34.9	2	35.4	1	17.4
Smith	......	......	2	13.2	2	13.3	1	6.6	12	79.9	11	73.5	1	6.6	......	......
Stafford	2	17.5	......	......	9	78.5	4	35.6	5	43.5	7	62.0	3	26.3	2	17.7
Stanton	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
Stevens	......	......	......	......	1	26.0	......	......	......	......	1	24.6	......	......	......	......
Sumner, except	7	32.3	2	9.5	6	27.7	2	9.5	7	32.3	14	66.5	3	13.8	7	33.3
Wellington	4	59.5	......	......	5	74.5	4	57.5	9	134.0	5	72.0	1	14.8	2	28.8
Thomas	......	......	......	......	2	37.1	1	17.2	2	37.1	7	120.0	1	18.5	1	17.2
Trego	......	......	1	16.4	2	33.2	......	......	1	6.6	6	98.5	......	......	......	......
Wabaunsee	......	......	1	9.2	1	9.0	4	37.0	10	90.0	4	37.0	......	......	1	9.2
Wallace	......	......	......	......	......	......	2	81.5	2	98.5	......	......	......	......	......	......
Washington	1	5.7	2	11.7	2	11.5	2	11.7	14	80.7	11	64.7	2	11.5	1	5.8
Wichita	......	......	......	......	......	......	......	......	1	54.8	1	51.1	......	......	......	......
Wilson	5	22.3	4	18.8	7	32.6	9	42.2	17	79.2	8	37.6	4	18.6	2	9.4
Woodson	1	9.5	2	22.2	4	43.8	3	33.3	7	76.5	7	77.6	2	21.9	3	33.3
Wyandotte, except	7	57.5	5	40.5	14	115.0	16	130.0	5	41.1	12	91.0	5	41.1	1	8.1
Kansas City	17	16.8	19	18.6	113	111.5	118	114.8	86	85.0	87	84.7	16	15.8	18	17.5
Rosedale	2	25.4	3	38.0	7	88.7	7	88.7	13	165.0	7	88.7	1	12.7	1	12.7

TABLE No. 4—CONTINUED. Deaths and death rates, certain diseases, 1920 and 1921.

COUNTIES AND CITIES.	Cerebral hemorrhage and paralysis.				Organic heart disease.				Diarrhea and enteritis (under 2 years).			
	1920.		1921.		1920.		1921.		1920.		1921.	
	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.
STATE TOTALS	1,760	98.8	1,805	100.2	1,825	102.5	1,609	89.9	531	29.7	459	25.6
Allen, except	13	79.0	20	121.0	8	48.5	17	103.0	8	48.5	2	12.2
Iola	13	144.0	16	180.0	10	110.0	13	147.0	5	55.0	1	11.2
Anderson	18	142.0	18	147.0	8	63.0	16	130.5	2	15.8	1	8.1
Atchison, except	9	83.5	6	52.5	8	74.0	3	26.2	....	....	4	35.0
Atchison city	18	121.0	14	91.5	13	87.5	13	85.0	1	6.7	2	13.1
Barber	5	53.0	6	64.5	2	21.2	5	53.7	6	64.0	4	43.0
Barton, except	8	59.0	10	73.0	8	59.0	8	58.4	5	40.5	3	22.0
Great Bend	8	154.0	7	139.3	9	160.5	7	139.3	1	17.4	1	19.9
Bourbon, except	7	56.5	15	117.9	8	64.7	13	102.2	3	24.0	5	39.3
Fort Scott	13	101.0	17	136.0	15	117.0	10	80.0	6	46.5	2	16.0
Brown	28	135.0	34	166.6	13	62.5	32	156.8	4	19.3	5	24.5
Butler, except	18	67.0	10	39.0	10	41.0	9	35.1	2	7.4	8	31.2
Augusta	3	71.5	4	92.0	3	71.5	4	92.0	3	71.5	1	23.0
El Dorado	10	88.0	5	27.3	7	62.0	5	27.3	6	53.0	3	16.4
Chase	4	64.0	6	88.8	6	95.5	5	74.0	3	48.0	....	....
Chautauqua	9	77.5	7	59.1	7	60.5	7	59.1	8	69.0	4	33.8
Cherokee, except	13	42.7	25	81.2	24	79.0	18	58.5	3	9.8	9	29.2
Galena	7	147.0	10	212.0	5	105.0	6	127.2	....	....	3	63.6
Cheyenne	5	87.0	1	17.3	2	34.8	1	17.3	1	17.4	....	....
Clark	2	39.8	3	61.3	2	39.8	3	61.3	....	....	1	20.4
Clay	11	70.0	16	102.4	22	140.0	13	83.2	....	....	2	12.8
Cloud, except	12	94.0	18	138.6	9	70.5	16	123.2	2	15.7	....	....
Concordia	9	189.0	10	215.0	6	126.0	8	172.0	....	....	2	43.0
Coffey	24	160.0	18	119.7	11	73.0	9	59.8	4	26.6	2	13.3
Comanche	4	77.8	....	....	1	19.4	....	....	....	....	....	....
Cowley, except	20	124.2	16	107.2	17	106.0	11	73.7	1	6.2	2	13.4
Arkansas City	16	138.0	16	139.2	16	138.0	15	130.5	2	17.2	5	43.5
Winfield	14	158.0	12	134.3	16	181.0	12	134.3	2	22.6	1	11.2
Crawford, except	27	62.7	42	98.3	27	62.7	36	84.2	20	46.4	12	28.1
Pittsburg	12	66.0	20	111.6	11	60.5	17	94.8	2	11.0	5	27.9
Decatur	6	75.0	8	98.1	9	112.0	7	85.9	....	....	1	12.3
Dickinson	26	98.0	23	90.6	27	101.5	21	82.7	4	15.1	5	19.7
Doniphan	14	91.5	11	71.5	12	78.5	9	58.5	....	....	9	58.5
Douglas, except	7	60.0	17	14.6	12	103.0	14	12.0	2	17.2	....	....
Lawrence	16	121.0	17	125.8	20	151.0	17	125.8	....	....	2	14.8
Edwards	6	89.0	9	132.3	7	104.0	7	102.9	6	89.0	1	14.7
Elk	7	67.7	8	77.9	11	106.0	5	48.7	....	....	1	9.7
Ellis	11	77.5	10	67.7	12	84.5	10	67.7	9	63.5	14	94.8
Ellsworth	15	149.0	15	147.0	8	79.5	14	137.2	2	19.5	1	9.8
Finney	7	90.5	3	40.2	2	25.8	3	40.2	6	77.5	7	93.8

Ford, except	8	82.5	11	119.9	20	203.0	9	98.1	2	20.3	3	32.7
Dodge City	4	78.0	4	66.2	7	136.0	4	66.2	4	78.0	4	66.2
Franklin, except	18	134.0	10	78.0	5	37.1	8	62.4	2	14.9	1	7.8
Ottawa	25	261.9	19	199.5	7	73.5	18	189.0	1	10.4	1	10.5
Geary, except	2	35.1	3	47.4	5	87.0	2	31.6	3	52.3	4	63.2
Junction City	6	93.0	4	56.4	8	124.0	3	42.3	5	77.5	2	28.2
Gove	1	20.0	4	78.4	5	100.0	2	39.2	2	40.0	4	78.4
Graham	8	107.0	3	40.0	10	133.5	3	40.0	1	13.3	7	93.5
Grant	1	89.5	1	76.6	...	...	...	...	1	89.5	...	...
Gray	1	23.4	1	21.5	2	47.0	...	...	1	23.4	1	21.5
Greeley	...	...	...	...	...	...	...	...	...	...	1	88.2
Greenwood	12	81.7	10	65.0	9	61.3	7	45.5	2	13.6	8	52.0
Hamilton	2	84.0	5	200.9	...	...	5	200.9	...	...	...	...
Harper	13	96.0	11	81.4	7	51.5	11	81.4	10	73.5	...	...
Harvey, except	7	65.0	10	92.0	10	92.7	10	92.0	1	9.2	1	9.2
Newton	20	204.4	18	183.0	13	133.0	18	183.0	7	71.5	7	71.4
Haskell	...	...	...	...	...	...	...	...	2	154.0	...	...
Hodgeman	4	106.4	4	112.6	1	26.6	4	112.6	1	26.6	2	56.3
Jackson	15	100.0	20	132.0	18	120.0	19	118.8	4	26.6	2	13.2
Jefferson	16	224.0	16	113.9	15	210.0	14	99.7	2	14.0	1	7.1
Jewell	12	76.5	13	83.8	10	63.5	10	64.5	1	6.3	1	6.4
Johnson	34	193.5	28	156.8	17	96.6	20	112.0	3	17.1	2	11.2
Kearny	2	79.0	2	80.4	...	...	2	80.4	...	...	1	40.2
Kingman	9	74.0	9	76.5	10	82.0	9	76.5	3	24.6	1	8.5
Kiowa	3	49.8	7	114.8	6	99.5	5	82.0	4	66.5	2	32.8
Labette, except	19	105.5	22	111.3	31	172.0	18	91.2	6	33.3	4	20.2
Parsons	14	82.5	17	96.9	19	112.0	15	85.5	8	47.0	1	5.7
Lane	2	77.3	4	137.7	3	116.0	2	68.8	2	77.3	1	34.4
Leavenworth, except	34	168.0	46	115.2	120	588.0	44	105.6	2	9.6	2	9.6
Leavenworth city	31	155.0	36	180.0	32	160.0	34	170.0	5	25.0	6	30.0
Lincoln	12	120.0	5	49.7	6	60.0	3	29.8	1	10.0	...	...
Linn	17	113.0	18	118.2	32	212.3	16	105.0	3	19.9	1	6.6
Logan	4	113.4	1	26.5	1	28.4	1	26.5	2	56.7	2	53.0
Lyon, except	13	88.0	11	75.9	17	115.0	11	75.9	6	40.5	5	34.5
Emporia	17	147.3	13	107.9	12	104.0	13	107.9	10	86.5	4	33.2
Marion	23	94.5	11	41.8	13	48.5	10	38.0	9	37.0	8	30.4
Marshall	36	153.0	15	66.6	33	140.5	13	57.7	6	25.5	1	4.4
McPherson	26	121.7	30	141.9	23	108.7	27	127.7	1	4.8	5	23.6
Meade	...	...	2	37.4	6	111.0	1	18.7	2	37.0	2	37.4
Miami	27	149.5	39	207.7	42	233.0	38	202.3	4	22.2	1	5.3
Mitchell	20	147.0	16	121.6	23	170.0	15	114.0	3	22.0	6	45.6
Montgomery, except	22	92.8	28	113.7	34	143.0	22	89.3	15	63.2	8	32.5
Coffeyville	8	63.0	11	68.4	13	102.5	8	49.8	1	7.9	6	37.3
Independence	16	96.5	21	165.9	10	60.2	14	110.6	7	42.2	13	102.7
Morris	7	58.2	14	116.2	7	58.2	10	83.0	4	33.3	1	8.3
Morton	...	...	...	...	1	29.3	...	...	2	58.6	...	...
Nemaha	13	71.2	16	86.4	15	82.2	14	75.6	1	5.4	2	10.8
Neosho, except	10	74.5	13	100.1	16	119.0	11	84.7	3	22.3	4	30.8
Chanute	15	140.0	20	180.5	11	103.5	16	144.4	4	33.6	1	9.0
Ness	...	...	1	13.4	2	28.0	...	...	1	14.0	3	40.2
Norton	2	17.8	4	34.8	12	107.0	4	34.8	2	17.8	...	...
Osage	17	84.2	26	128.7	26	128.0	24	118.8	3	14.8	4	19.8
Osborne	15	119.5	9	70.5	8	64.0	6	47.0	1	7.9	2	15.7
Ottawa	14	132.5	12	112.8	17	161.0	10	94.0	2	18.9	2	18.8
Pawnee	6	67.2	13	150.1	9	101.0	11	127.0	4	44.8	6	69.3
Phillips	6	49.0	5	39.1	13	106.0	2	15.7	...	...	4	31.3

TABLE No. 4—Continued. Deaths and death rates, certain diseases, 1920 and 1921.

Counties and Cities.	Cerebral hemorrhage and paralysis.				Organic heart disease.				Diarrhea and enteritis (under 2 years).			
	1920.		1921.		1920.		1921.		1920.		1921.	
	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.
Pottawatomie	16	103.0	18	117.0	22	142.0	17	110.5	......	......	1	6.5
Pratt	6	47.8	5	39.0	18	143.5	4	31.2	8	63.7	3	23.4
Rawlins	5	79.0	6	94.0	4	63.2	6	94.0	1	15.8	2	31.3
Reno, except	20	92.0	20	96.0	16	73.5	18	86.4	3	13.8	8	38.4
Hutchinson	32	119.2	23	78.2	19	71.0	18	61.2	5	18.7	4	13.6
Republic	20	129.0	14	176.8	11	71.0	13	163.8	3	19.4	3	37.8
Rice	17	116.0	17	121.5	12	81.8	15	107.2	4	27.3	4	28.6
Riley, except	8	84.0	3	31.2	9	94.0	3	31.2	1	10.0	2	20.8
Manhattan	9	120.0	12	178.8	10	133.5	12	178.8	......	......	1	14.9
Rooks	8	82.0	2	19.7	7	71.7	1	9.8	3	30.3	5	49.1
Rush	5	59.5	3	36.9	6	71.5	1	12.3	2	23.8	4	49.2
Russell	8	75.5	4	36.4	8	75.5	1	9.1	2	18.9	2	18.2
Saline, except	9	91.0	10	102.0	3	30.3	8	81.6	......	......	1	10.2
Salina	15	99.2	21	136.5	15	99.2	18	117.0	3	19.8	3	19.5
Scott	......	......	5	148.7	1	31.7	3	89.2	1	31.7	2	59.5
Sedgwick, except	17	83.5	26	130.0	15	73.5	24	120.0	5	24.5	3	15.0
Wichita	77	99.8	70	87.9	73	94.5	60	75.4	33	42.7	26	32.7
Seward	7	110.5	5	79.5	2	31.6	4	63.6	10	158.0	4	63.6
Shawnee, except	35	182.0	24	117.6	34	177.0	24	117.6	4	20.9	4	19.6
Topeka	68	136.0	64	129.3	93	186.0	56	113.1	16	32.0	19	38.4
Sheridan	4	72.5	7	123.4	......	......	7	123.4	4	72.5	1	17.6
Sherman	5	88.5	2	34.9	5	88.5	2	34.9	2	35.4	2	34.9
Smith	8	53.0	6	39.9	10	66.5	4	26.6	2	13.3	2	13.3
Stafford	16	140.0	7	62.0	10	87.0	7	62.0	5	43.5	4	35.4
Stanton	2	200.0	2	198.4	......	......	2	198.4	......	......	......	......
Stevens	1	26.0	7	172.4	1	26.0	5	123.1	2	52.2	1	24.6
Sumner, except	20	92.5	17	80.9	10	46.0	13	61.9	9	41.5	......	......
Wellington	11	163.5	12	172.8	3	44.5	11	158.4	5	74.5	1	14.4
Thomas	1	18.5	6	102.8	1	18.5	6	102.8	3	55.7	1	17.1
Trego	3	49.8	4	65.7	3	49.8	4	65.7	1	6.6	1	16.4
Wabaunsee	3	27.1	14	128.8	9	81.1	13	119.6	1	9.0	1	9.2
Wallace	2	98.5	......	......	......	......	......	......	1	49.2	......	......
Washington	17	98.0	17	99.4	17	98.0	15	87.7	3	17.3	5	29.2
Wichita	......	......	2	102.6	2	109.7	1	51.3	......	......	......	......
Wilson	25	116.5	14	65.8	15	70.0	12	56.4	1	4.6	8	37.6
Woodson	11	120.5	7	77.7	8	87.5	5	55.5	2	21.9	1	11.1
Wyandotte, except	15	123.5	9	72.9	13	107.0	9	72.9	3	24.6	4	32.4
Kansas City	86	85.0	97	94.1	117	115.5	90	87.3	64	63.2	31	30.1
Rosedale	3	38.0	6	76.2	7	88.7	5	63.5	8	101.5	3	38.1

TABLE No. 4—Continued. Deaths and death rates, certain diseases, 1920 and 1921.

Counties and Cities.	Diseases of the liver.				Bright's disease.				Malformations and early infancy.				Suicides.			
	1920.		1921.		1920.		1921.		1920.		1921.		1920.		1921.	
	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.
State Totals	292	16.3	367	26.0	1,244	69.9	1,465	81.5	1,469	81.4	1,506	83.5	186	10.4	210	11.7
Allen, except	......	......	6	36.3	11	66.5	14	84.5	8	48.5	12	72.5	1	6.0	3	18.1
Iola	2	22.0	7	78.5	5	55.0	8	90.0	9	100.0	12	135.0	1	11.0	1	11.2
Anderson	3	23.8	6	49.0	9	71.0	9	73.4	17	134.0	9	73.4	......	......	3	24.5
Atchison, except	3	27.9	......	......	5	46.5	17	148.5	6	55.5	6	52.5	2	18.6	4	35.0
Atchison city	3	20.1	2	13.1	14	94.5	15	98.0	15	101.0	16	105.0	2	13.5	4	26.2
Barber	......	......	1	10.8	8	85.0	10	109.0	18	192.0	6	64.5	......	......	......	......
Barton, except	4	29.2	3	21.9	6	44.0	8	58.0	13	95.0	10	73.8	......	......	1	7.2
Great Bend	1	17.4	2	39.0	8	154.0	3	58.1	3	53.5	8	158.0	1	17.4	......	......
Bourbon, except	......	......	1	7.8	6	48.5	12	94.0	4	32.4	9	70.2	3	24.0	1	7.8
Fort Scott	......	......	4	32.4	11	85.5	17	138.0	18	140.0	14	113.0	2	15.5	1	8.1
Brown	1	4.8	......	......	6	29.0	17	83.2	18	87.0	10	48.3	1	4.8	4	19.5
Butler, except	......	......	3	11.5	4	14.8	10	38.8	18	67.0	23	89.1	2	7.4	2	7.7
Augusta	......	......	......	......	5	119.0	4	92.0	11	262.0	3	69.0	1	24.0	1	23.0
El Dorado	1	8.8	2	17.7	......	......	9	79.7	13	115.0	6	53.2	2	17.7	1	8.8
Chase	1	15.9	......	......	8	127.5	4	58.0	8	127.5	2	29.0	......	......	1	14.5
Chautauqua	2	17.2	3	25.2	4	34.3	5	41.8	17	146.0	9	76.0	......	......	2	16.6
Cherokee, except	4	13.2	2	6.8	22	72.0	36	118.0	22	72.0	26	85.4	2	6.5	2	6.8
Galena	5	105.0	5	106.0	7	147.0	9	190.0	4	83.5	2	42.5	......	......	......	......
Cheyenne	......	......	1	17.6	......	......	1	17.6	4	69.7	8	138.0	......	......	......	......
Clark	......	......	1	20.4	1	19.9	2	40.8	3	59.5	3	61.2	......	......	......	......
Clay	2	12.8	3	19.2	5	31.8	8	51.0	5	31.8	10	63.9	1	6.3	......	......
Cloud, except	3	23.6	1	7.7	3	23.6	5	38.7	19	149.0	8	62.0	1	7.8	1	7.7
Concordia	4	84.0	5	107.5	8	168.0	11	221.5	8	168.0	5	107.5	1	21.0	1	21.5
Coffey	3	19.9	4	26.6	9	60.0	7	46.5	8	53.0	7	46.5	......	......	......	......
Comanche	2	38.8	......	......	1	19.4	6	118.5	6	117.0	3	59.2	1	19.4	......	......
Cowley, except	1	6.2	3	20.0	6	37.4	18	120.5	12	74.5	9	60.2	1	6.2	2	13.4
Arkansas City	1	8.6	1	8.6	13	112.0	14	121.5	12	103.5	8	69.5	......	......	......	......
Winfield	4	45.5	4	44.8	5	56.5	11	124.0	14	158.0	7	78.4	1	11.3	......	......
Crawford, except	8	18.6	10	25.7	37	86.0	41	96.0	35	81.0	45	105.5	12	27.8	7	16.4
Pittsburg	3	16.5	1	5.5	17	93.5	18	99.5	11	60.5	13	72.0	2	11.0	2	11.0
Decatur	2	25.0	......	......	3	37.5	5	62.0	9	112.0	15	186.0	......	......	2	24.8
Dickinson	3	11.3	4	15.8	21	79.0	24	95.0	19	71.5	21	83.0	2	7.6	2	7.9
Doniphan	2	13.1	1	6.5	9	59.0	12	78.4	16	105.0	15	98.0	3	19.6	1	6.5
Douglas, except	......	......	......	......	12	103.0	6	51.5	5	43.0	5	43.0	2	17.2	2	17.2
Lawrence	4	30.2	3	22.2	14	106.0	9	66.5	12	90.5	15	111.0	3	22.6	1	7.4
Edwards	1	14.8	......	......	4	59.4	4	58.7	3	44.5	6	88.0	......	......	2	29.4
Elk	1	9.6	2	19.5	3	28.9	7	68.3	5	48.2	3	29.3	......	......	......	......
Ellis	1	7.0	2	13.5	7	49.5	7	47.5	13	91.5	18	122.0	2	14.1	2	13.5
Ellsworth	2	19.5	4	39.3	7	69.5	8	78.5	11	109.0	6	59.0	2	19.5	1	9.8
Finney	......	......	3	40.0	6	77.5	5	67.0	10	129.5	10	147.0	1	12.9	2	26.8

TABLE No. 4—CONTINUED. Deaths and death rates, certain diseases, 1920 and 1921.

COUNTIES AND CITIES.	Diseases of the liver.				Bright's disease.				Malformations and early infancy.				Suicides.			
	1920.		1921.		1920.		1921.		1920.		1921.		1920.		1921.	
	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.
Ford, except	3	30.8	3	32.7	2	20.3	7	76.5	7	72.0	8	87.4	1	10.1	1	10.8
Dodge City	2	39.0	2	33.0	3	58.5	2	33.0	10	195.0	10	182.0	......	......	1	16.5
Franklin, except	1	7.4	......	......	10	74.5	12	93.6	10	74.5	6	46.8	......	......	3	23.4
Ottawa	5	52.5	2	21.0	7	73.5	12	126.0	8	83.9	9	94.5	......	......	1	10.5
Geary, except	1	17.4	......	......	......	......	3	47.4	4	70.5	4	63.2	......	......	2	31.6
Junction City	1	15.5	......	......	8	124.0	9	127.3	6	93.0	10	141.4	......	......	4	56.4
Gove	1	20.0	1	19.5	1	20.0	3	58.5	7	140.0	6	119.0	......	......	......	......
Graham	1	13.3	......	......	3	40.0	4	26.7	4	53.4	6	80.0	......	......	......	......
Grant	1	89.5	......	......	......	......	......	......	......	......	......	......	......	......	......	......
Gray	......	......	......	......	1	23.4	5	107.5	4	94.0	6	129.0	2	47.0	......	......
Greeley	......	......	......	......	1	88.0	1	88.0	......	......	......	......	......	......	......	......
Greenwood	1	6.8	1	6.5	11	75.0	12	78.6	6	41.0	8	52.4	1	6.8	2	13.1
Hamilton	......	......	......	......	2	84.0	......	......	3	126.0	5	200.0	......	......	1	42.0
Harper	2	14.7	5	37.2	12	88.5	10	74.4	5	37.0	8	59.2	1	7.3	2	14.8
Harvey, except	3	27.9	2	18.4	9	83.5	8	73.6	10	92.7	5	46.0	1	9.2	......	......
Newton	5	51.1	6	61.2	11	112.0	14	153.5	19	194.0	17	174.0	3	33.0	......	......
Haskell	......	......	......	......	......	......	......	......	......	......	3	184.5	......	......	......	......
Hodgeman	......	......	......	......	......	......	4	112.8	3	80.0	2	56.4	......	......	......	......
Jackson	1	6.6	1	6.6	6	40.0	10	66.0	15	100.0	16	105.6	2	13.3	1	6.6
Jefferson	1	7.0	3	21.4	8	56.0	10	71.2	9	63.0	14	99.6	2	14.0	3	21.4
Jewell	2	12.7	3	19.4	8	51.0	12	77.6	10	63.5	14	90.5	1	6.3	......	......
Johnson	5	28.4	3	16.8	9	51.2	13	72.5	7	39.9	15	82.8	4	22.8	3	16.8
Kearny	......	......	......	......	2	79.0	......	......	2	79.0	3	120.0	1	39.5	1	40.0
Kingman	4	32.8	1	8.5	12	98.5	10	85.0	16	133.0	12	102.0	......	......	1	8.5
Kiowa	1	16.6	1	16.4	1	16.6	2	32.8	5	83.0	7	114.8	2	33.2	1	16.4
Labette, except	2	11.1	8	45.0	8	44.3	13	73.4	12	66.5	12	63.0	2	11.1	2	11.2
Parsons	6	35.4	5	28.5	10	59.0	17	97.0	14	82.5	15	85.5	1	5.9	2	11.4
Lane	......	......	......	......	......	......	1	37.0	1	38.6	1	37.0	......	......	......	......
Leavenworth, except	4	19.3	6	28.8	58	280.0	50	240.0	7	33.7	6	28.8	4	19.3	1	4.8
Leavenworth city	4	20.0	7	34.9	15	71.0	26	129.5	11	55.0	18	90.0	1	5.0	2	10.0
Lincoln	......	......	1	10.0	6	60.0	6	60.0	8	80.0	6	60.0	1	10.0	......	......
Linn	3	19.9	3	19.8	11	73.0	5	33.0	6	39.9	8	46.2	1	6.6	......	......
Logan	1	28.4	1	27.5	1	28.4	2	55.0	4	113.4	4	110.0	......	......	1	27.5
Lyon, except	1	6.7	2	13.6	3	20.3	8	54.4	13	88.0	4	27.2	1	6.7	1	6.8
Emporia	4	34.7	3	24.9	9	78.0	9	74.7	6	52.0	10	83.0	3	26.0	4	33.1
Marion	4	16.5	6	23.0	23	94.5	24	92.5	23	94.5	25	96.4	1	4.1	4	16.9
Marshall	3	12.8	6	26.7	13	55.3	16	71.2	14	59.5	22	98.0	......	......	3	13.4
McPherson	7	32.8	7	32.8	8	37.4	9	42.0	15	70.0	10	47.0	1	4.8	4	18.7
Meade	......	......	......	......	3	55.4	2	37.4	1	18.4	5	93.8	......	......	......	......
Miami	2	11.1	1	5.3	19	105.5	11	58.5	17	94.5	21	112.0	3	16.6	2	10.6
Mitchell	3	22.0	2	15.3	13	96.0	14	107.0	8	59.0	16	122.0	2	14.7	1	7.6

Montgomery, except	3	12.6	9	36.4	18	76.0	12	48.5	19	80.0	24	97.5	2	8.4	5	20.1
Coffeyville	2	142.0	6	47.7	5	39.4	13	103.5	18	142.0	11	87.2	2	142.0	1	7.9
Independence	2	12.0	3	18.7	11	66.4	11	68.2	14	84.5	10	62.0	....	....	2	12.4
Morris	1	8.3	2	16.6	6	50.0	5	41.5	9	75.0	10	83.0	....	....	1	8.3
Morton	1	29.3	2	61.5	2	58.6	....	....	2	58.6	2	61.5	....	....	....	....
Nemaha	2	11.0	3	16.5	13	71.2	9	49.5	8	43.8	7	38.2	1	5.4	4	21.7
Neosho, except	1	7.4	1	7.7	10	74.0	7	54.0	9	67.0	10	76.3	....	....	1	7.7
Chanute	3	28.2	....	....	5	47.0	4	35.5	21	197.0	13	118.0	1	9.4	1	9.0
Ness	....	....	1	13.4	3	42.0	....	....	8	112.0	13	138.0	....	....	....	....
Norton	1	8.9	5	43.5	11	97.5	6	52.2	11	97.5	11	96.0	....	....	2	17.4
Osage	2	9.9	2	9.9	21	104.0	12	60.0	8	39.6	10	49.9	2	9.9	3	14.9
Osborne	1	7.9	....	....	10	80.0	9	70.5	6	48.0	12	94.0	....	....	2	15.7
Ottawa	1	9.4	1	9.4	8	76.0	10	94.5	6	56.8	9	85.0	....	....	....	....
Pawnee	....	....	2	23.0	6	67.2	8	92.5	7	78.5	14	162.0	1	11.2	2	23.0
Phillips	4	32.6	3	23.6	7	57.2	8	62.7	13	106.0	6	47.0	2	16.3	2	15.7
Pottawatomie	5	32.3	4	26.3	7	45.2	13	85.7	12	77.5	8	52.6	....	....	....	....
Pratt	1	8.0	2	15.6	10	80.0	11	85.5	9	71.8	10	78.0	3	24.0	1	7.8
Rawlins	1	15.8	1	15.7	1	15.8	3	47.1	5	79.0	11	172.5	....	....	1	15.7
Reno, except	....	....	1	4.7	12	55.2	13	62.0	13	60.0	13	62.0	3	13.8	1	4.7
Hutchinson	7	26.0	3	11.0	13	48.5	18	66.0	25	93.0	28	102.5	3	11.2	6	22.0
Republic	....	....	2	12.5	9	58.2	8	50.0	8	51.6	8	50.0	5	32.3	2	12.5
Rice	3	20.5	3	21.4	7	47.8	12	85.8	16	109.0	14	100.0	....	....	1	7.1
Riley, except	1	10.0	....	....	8	84.0	10	104.0	3	31.5	6	62.4	....	....	1	10.4
Manhattan	....	....	....	....	6	80.0	4	59.5	7	93.5	6	89.5	2	26.7	2	29.8
Rooks	1	10.2	6	59.0	2	20.2	5	49.2	7	71.7	6	59.0	1	10.2	1	9.8
Rush	3	35.3	....	....	5	59.5	2	24.6	6	71.5	13	160.0	....	....	....	....
Russell	2	18.9	2	18.4	6	56.7	10	91.2	10	94.5	13	118.5	....	....	....	....
Saline, except	1	10.1	1	10.2	4	40.5	8	81.5	8	81.0	8	81.5	....	....	....	....
Salina	3	19.8	7	41.5	11	72.7	10	64.8	10	66.0	14	90.7	2	13.3	2	13.0
Scott	....	....	....	....	3	95.0	2	58.5	2	63.5	1	29.6	....	....	....	....
Sedgwick, except	1	4.9	2	10.1	7	34.3	8	40.6	16	78.5	12	61.0	2	9.8	....	....
Wichita	24	31.1	28	35.0	57	74.0	62	78.0	82	106.0	68	85.5	17	22.0	9	11.3
Seward	1	15.8	3	47.8	1	15.8	11	175.5	8	126.3	7	110.1	....	....	2	31.8
Shawnee, except	7	36.6	3	14.7	17	89.0	31	152.0	13	68.0	11	54.0	4	20.9	5	24.6
Topeka	8	16.0	18	36.3	46	92.0	62	125.0	57	114.0	67	137.0	9	18.0	7	14.1
Sheridan	2	36.3	....	....	3	54.5	2	35.2	9	163.0	10	176.5	1	18.1	....	....
Sherman	....	....	....	....	2	35.4	2	34.9	3	53.2	2	34.9	....	....	....	....
Smith	1	6.6	1	6.6	11	73.2	7	46.2	10	66.5	11	72.7	3	20.0	3	19.8
Stafford	....	....	1	8.8	8	70.0	10	88.7	13	113.5	9	80.0	....	....	....	....
Stanton	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Stevens	....	....	1	24.6	2	52.2	....	....	4	104.4	4	98.5	....	....	....	....
Sumner, except	4	18.5	6	28.5	18	83.0	18	85.6	11	50.8	12	57.0	3	13.8	1	4.7
Wellington	4	59.5	1	14.4	7	104.0	6	86.5	12	178.5	8	115.2	....	....	1	14.4
Thomas	....	....	....	....	1	18.5	2	34.2	3	55.7	6	103.0	....	....	....	....
Trego	....	....	....	....	3	49.8	1	16.4	7	116.5	8	131.0	....	....	....	....
Wabaunsee	....	....	2	18.5	6	54.2	6	55.6	8	72.2	7	65.0	1	9.0	2	18.5
Wallace	....	....	....	....	1	49.2	2	81.5	2	98.5	2	81.5	....	....	1	40.7
Washington	2	11.5	4	23.4	6	34.6	11	64.2	12	69.2	17	99.2	2	11.5	3	17.5
Wichita	....	....	....	....	....	....	....	....	....	....	2	102.5	....	....	....	....
Wilson	3	14.0	4	18.6	12	56.0	15	70.5	14	65.2	24	113.0	3	14.0	5	23.5
Woodson	1	9.5	1	10.2	10	109.8	6	66.5	3	32.9	3	33.2	....	....	1	10.2
Wyandotte, except	1	8.2	4	32.4	17	140.0	18	146.0	7	57.5	5	40.5	....	....	3	24.3
Kansas City	17	16.8	22	21.4	95	93.8	123	119.5	82	80.8	83	80.7	15	14.8	10	9.7
Rosedale	2	25.4	2	25.4	7	88.7	7	88.5	3	33.0	9	114.0	....	....	....	....

TABLE No. 4—CONTINUED. Deaths and death rate, certain diseases, 1920 and 1921.

COUNTIES AND CITIES.	Accidents.				Homicides.				Influenza.				Pneumonia (all forms).			
	1920.		1921.		1920.		1921.		1920.		1921.		1920.		1921.	
	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.
STATE TOTALS	1,780	63.8	1,025	57.0	89	5.0	138	7.7	1,074	60.0	166	9.2	2,328	130.0	1,050	58.5
Allen, except	12	73.0	5	31.0	......	......	1	6.0	19	115.0	5	31.0	17	103.0	19	115.0
Iola	5	55.0	7	78.5	......	......	1	11.2	6	66.0	3	33.7	19	201.0	6	67.5
Anderson	9	100.0	3	24.5	......	......	......	......	6	47.5	2	16.3	15	122.0	2	16.3
Atchison, except	7	65.0	4	35.0	1	9.2	1	8.7	10	92.5	1	8.7	12	111.0	5	43.5
Atchison city	9	60.5	6	39.4	......	......	2	13.1	16	108.0	2	13.1	25	168.0	10	72.0
Barber	3	32.0	3	32.4	......	......	......	......	3	32.0	......	......	7	74.5	5	54.0
Barton, except	8	59.0	8	58.0	......	......	1	7.2	11	81.0	3	21.6	11	81.0	9	63.9
Great Bend	3	53.5	10	200.0	1	17.4	1	20.0	6	108.0	1	20.0	4	70.0	7	140.0
Bourbon, except	7	56.5	8	65.0	......	......	......	......	6	48.5	1	8.1	21	170.0	7	57.0
Fort Scott	13	101.0	1	8.1	2	15.5	......	......	6	46.5	2	16.2	20	155.0	5	40.5
Brown	3	14.5	9	44.0	1	4.8	1	4.8	12	49.0	4	19.5	33	159.0	14	68.5
Butler, except	14	52.0	9	35.0	......	......	......	......	8	29.8	3	11.5	18	67.0	6	23.1
Augusta	6	142.0	7	161.0	......	......	1	23.0	2	48.0	1	23.0	8	190.0	4	93.3
El Dorado	18	160.0	7	62.0	2	17.7	2	17.5	6	53.0	2	17.5	17	150.1	7	62.0
Chase	3	48.0	7	103.5	......	......	......	......	1	15.9	1	14.8	6	95.5	3	44.4
Chautauqua	9	77.5	8	67.5	......	......	......	......	12	112.0	1	8.4	25	216.0	10	84.5
Cherokee, except	32	105.5	18	49.0	......	......	2	6.5	36	118.0	1	3.2	51	168.0	14	45.8
Galena	1	21.0	1	21.2	......	......	......	......	4	83.5	......	......	7	147.0	8	170.0
Cheyenne	2	34.8	2	34.6	......	......	......	......	4	69.7	......	......	4	69.7	5	86.5
Clark	1	19.9	......	......	......	......	......	......	2	39.8	......	......	9	179.0	3	61.2
Clay	6	38.0	7	44.8	......	......	......	......	3	19.0	4	25.6	14	89.0	5	32.0
Cloud, except	2	15.7	8	62.0	......	......	......	......	6	47.0	......	......	9	70.0	10	77.5
Concordia	6	128.0	3	64.5	......	......	1	21.5	1	21.0	1	21.5	11	230.0	5	107.4
Coffey	4	26.6	7	46.5	......	......	......	......	7	46.5	3	20.0	11	73.0	6	40.0
Comanche	2	38.8	1	19.4	......	......	......	......	......	......	1	19.4	5	97.4	1	19.4
Cowley, except	2	12.4	11	73.7	1	6.2	1	6.7	3	18.6	1	6.7	16	99.5	8	53.5
Arkansas City	11	95.0	10	86.8	......	......	3	26.0	6	52.0	......	......	21	181.0	16	139.0
Winfield	11	124.0	3	33.6	2	22.6	......	......	2	22.6	1	11.2	11	124.0	4	44.7
Crawford, except	40	93.0	33	77.0	2	4.6	5	11.7	33	76.6	8	18.7	61	141.0	25	58.5
Pittsburg	4	22.0	7	38.6	1	5.5	1	5.5	4	22.0	1	5.5	18	99.0	4	22.2
Decatur	1	12.5	3	37.2	......	......	......	......	7	87.5	1	12.4	14	175.0	6	74.5
Dickinson	16	60.8	15	59.3	2	7.6	......	......	6	22.6	1	39.4	25	95.0	19	75.0
Doniphan	5	32.8	8	52.2	1	6.5	1	6.5	9	59.0	......	......	18	118.0	7	45.7
Douglas, except	7	60.0	......	......	......	......	......	......	2	17.2	1	8.6	11	94.5	5	43.0
Lawrence	12	90.5	17	125.5	......	......	......	......	5	37.8	4	29.6	13	98.0	11	81.0
Edwards	1	14.8	3	44.0	......	......	1	14.7	5	74.0	1	14.7	19	281.0	5	73.0
Elk	8	77.0	2	19.3	......	......	......	......	7	67.5	2	19.3	11	106.0	4	38.6
Ellis	14	99.0	13	88.0	4	28.0	1	6.7	10	70.5	......	......	14	99.0	17	115.0
Ellsworth	6	59.2	4	39.2	......	......	2	19.6	9	89.4	......	......	7	69.5	5	49.0
Finney	4	51.7	7	93.6	......	......	2	26.8	3	38.8	2	26.8	13	168.0	7	93.6

Ford, except	6	61.8	6	65.5	1	10.1	......	......	10	101.5	2	21.8	16	165.0	4	43.5
Dodge City	7	136.0	6	99.4	1	19.5	......	......	3	58.5	1	16.5	10	195.0	4	61.2
Franklin, except	7	52.0	8	62.7	......	......	1	7.8	5	37.2	......	......	18	134.0	2	15.7
Ottawa	8	83.9	4	42.0	......	......	2	21.0	6	62.9	......	......	10	104.0	3	63.0
Geary, except	7	122.0	3	47.5	......	......	3	47.5	3	52.2	......	......	2	34.8	1	15.8
Junction City	3	46.5	1	14.1	1	15.5	......	......	4	62.0	......	......	10	155.0	5	70.7
Gove	5	100.0	3	58.5	......	......	......	......	7	140.0	......	......	6	120.0	1	19.5
Graham	8	107.0	1	13.3	......	......	......	......	10	133.5	1	13.3	6	80.0	3	40.0
Grant	......	......	1	76.5	......	......	......	......	......	......	......	......	1	89.5	......	......
Gray	7	164.0	......	......	......	......	......	......	1	23.4	......	......	2	47.0	1	21.6
Greeley	......	......	......	......	......	......	......	......	......	......	......	......	1	88.0	1	88.0
Greenwood	7	47.7	3	19.7	......	......	1	6.5	5	34.4	1	6.5	13	88.5	11	72.0
Hamilton	5	212.0	1	4.0	......	......	......	......	1	42.0	......	......	4	168.0	3	12.0
Harper	8	59.0	4	29.6	......	......	......	......	7	51.5	2	14.8	21	155.0	9	66.7
Harvey, except	10	93.0	9	83.0	......	......	......	......	5	46.4	1	7.9	15	139.0	12	110.0
Newton	9	92.0	10	102.0	2	22.0	1	10.2	8	81.7	1	10.2	22	222.5	7	71.4
Haskell	1	76.8	......	......	......	......	......	......	......	......	......	......	1	76.8	2	125.0
Hodgeman	2	53.2	3	84.5	......	......	......	......	2	53.2	......	......	4	106.4	1	28.0
Jackson	6	40.0	5	33.0	......	......	......	......	5	33.3	......	......	15	100.0	4	25.4
Jefferson	6	42.0	13	92.5	......	......	......	......	2	14.0	1	7.1	18	126.0	9	64.0
Jewell	3	19.0	8	51.5	......	......	......	......	6	38.0	1	6.4	10	63.5	4	25.8
Johnson	12	68.4	18	100.0	1	5.7	3	16.7	13	74.0	1	5.5	27	153.1	6	33.4
Kearny	1	39.5	1	40.0	1	39.5	......	......	......	......	......	......	2	79.0	2	80.5
Kingman	6	49.3	6	51.2	......	......	......	......	11	90.5	2	17.1	16	131.5	3	25.6
Kiowa	2	33.2	6	98.5	2	33.2	......	......	5	83.0	......	......	6	99.5	3	49.0
Labette, except	13	72.0	14	78.5	1	5.6	......	......	9	50.0	3	16.9	34	188.5	11	62.0
Parsons	7	41.3	7	39.5	......	......	2	10.4	11	65.0	1	5.7	27	159.0	9	51.2
Lane	3	116.0	3	111.0	......	......	......	......	4	154.0	......	......	7	270.0	......	......
Leavenworth, except	22	106.0	11	52.5	1	4.8	6	28.7	10	48.2	5	24.0	39	188.0	11	52.5
Leavenworth city	9	45.0	5	25.0	......	......	3	15.0	17	85.0	5	25.0	33	165.0	13	65.0
Lincoln	4	40.0	1	9.9	......	......	......	......	4	40.0	1	9.9	12	120.0	4	39.8
Linn	10	66.5	8	52.5	......	......	......	......	3	19.9	......	......	16	106.0	12	79.0
Logan	1	28.4	1	27.5	......	......	1	27.5	2	56.7	1	27.5	4	113.4	1	27.5
Lyon, except	8	54.2	10	69.2	......	......	1	6.9	8	54.2	1	6.9	19	123.5	10	69.2
Emporia	11	95.4	10	83.0	2	17.4	2	16.6	5	43.3	2	16.6	20	173.5	8	66.5
Marion	24	99.0	15	57.7	1	4.1	1	3.8	14	57.5	1	3.8	25	103.0	12	46.2
Marshall	6	25.6	5	22.2	......	......	......	......	9	38.3	......	......	11	47.0	10	44.5
McPherson	9	42.0	9	42.2	1	4.8	......	......	13	61.0	4	18.7	25	117.0	15	70.2
Meade	1	18.4	3	56.2	......	......	......	......	4	73.8	......	......	1	18.4	2	37.5
Miami	11	61.0	19	101.5	1	5.5	2	10.7	16	88.7	1	5.3	42	233.0	21	112.0
Mitchell	5	36.8	4	30.6	......	......	1	7.6	4	29.4	......	......	7	51.5	5	38.2
Montgomery, except	22	93.0	11	44.5	......	......	3	12.2	14	59.0	2	8.8	30	126.5	11	44.5
Coffeyville	12	94.9	14	110.1	2	15.8	3	23.9	9	71.0	3	23.9	18	142.0	12	95.5
Independence	10	60.2	3	18.7	4	24.1	......	......	14	84.5	1	6.2	14	84.5	9	56.0
Morris	3	25.0	11	91.0	......	......	1	8.3	4	33.3	1	8.3	8	66.6	4	33.2
Morton	3	88.0	2	62.0	......	......	......	......	1	29.3	......	......	4	117.5	1	31.0
Nemaha	4	22.0	6	32.5	......	......	1	5.4	11	60.2	1	5.4	22	120.5	10	54.2
Neosho, except	2	14.9	9	69.3	......	......	......	......	7	52.0	......	......	17	126.5	4	30.8
Chanute	7	65.7	10	90.0	1	9.4	......	......	6	56.5	2	18.0	13	122.0	2	18.0
Ness	3	42.0	6	80.1	......	......	......	......	2	28.0	1	13.4	7	98.0	1	13.4
Norton	9	80.0	15	130.5	......	......	......	......	4	35.6	2	17.4	10	89.0	8	69.7
Osage	14	69.5	7	35.0	1	4.9	......	......	11	54.5	2	10.0	29	144.0	12	60.0
Osborne	6	48.0	12	94.0	......	......	......	......	10	80.0	2	15.6	7	51.8	6	47.0
Ottawa	5	47.5	9	85.0	......	......	......	......	......	......	1	9.4	4	38.0	4	37.8

TABLE No. 4—CONCLUDED. Deaths and death rate, certain diseases, 1920 and 1921.

COUNTIES AND CITIES.	Accidents.				Homicides.				Influenza.				Pneumonia (all forms).			
	1920.		1921.		1920.		1921.		1920.		1921.		1920.		1921.	
	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.
Pawnee	6	67.2	6	69.0	....	....	....	....	1	11.2	....	....	12	134.5	5	57.6
Phillips	9	73.5	9	70.6	....	....	1	7.8	3	24.5	2	15.7	10	81.7	5	47.0
Pottawatomie	8	45.0	6	39.5	1	6.4	....	....	10	64.0	4	26.4	21	135.5	8	52.7
Pratt	5	39.9	4	31.2	3	23.9	1	7.8	7	55.8	....	....	10	80.0	2	15.7
Rawlins	8	126.5	1	15.7	1	15.8	....	....	9	142.0	....	....	25	395.0	6	94.0
Reno, except	11	50.5	8	38.1	1	4.6	....	....	16	73.5	....	....	20	92.0	12	57.0
Hutchinson	23	85.7	19	70.0	4	14.9	1	3.7	22	82.0	1	3.7	46	171.0	16	59.0
Republic	9	58.0	10	63.0	....	....	....	....	5	32.3	....	....	2	142.2	17	107.0
Rice	4	27.3	6	42.7	1	6.8	....	....	6	41.0	....	....	22	150.0	12	85.5
Riley, except	5	52.5	6	62.5	....	....	....	....	2	21.0	....	....	10	105.0	4	41.6
Manhattan	8	107.0	1	14.9	....	....	2	29.8	6	80.0	....	....	3	40.0	2	29.8
Rooks	4	41.0	3	27.0	....	....	....	....	11	113.5	1	9.0	6	61.5	5	45.0
Rush	3	35.6	2	24.6	....	....	1	12.3	6	71.5	2	24.6	8	95.2	6	73.7
Russell	7	66.2	4	36.4	....	....	....	....	10	94.5	2	18.2	5	47.3	1	9.1
Saline, except	1	10.1	2	20.4	....	....	....	....	7	70.9	1	10.2	16	162.0	5	51.0
Salina	14	92.5	15	97.2	2	13.3	....	....	5	33.1	....	....	19	125.5	9	58.2
Scott	....	....	3	89.0	....	....	....	....	4	127.0	....	....	7	221.0	2	59.4
Sedgwick, except	3	14.7	4	20.2	....	....	....	....	8	39.3	....	....	16	78.5	5	25.4
Wichita	81	105.0	54	67.5	12	15.5	21	26.4	50	65.0	7	8.7	112	145.0	54	67.5
Seward	4	63.2	8	127.5	....	....	....	....	3	47.2	....	....	5	79.0	2	31.8
Shawnee, except	15	78.5	7	34.4	1	5.2	....	....	6	31.4	....	....	24	125.5	12	59.0
Topeka	24	48.0	40	80.7	3	6.0	8	16.2	22	44.0	1	2.1	78	156.0	34	68.5
Sheridan	5	90.6	2	35.2	1	18.1	....	....	4	72.5	....	....	6	108.7	8	140.2
Sherman	1	17.7	4	69.8	....	....	....	....	11	195.0	2	34.9	8	142.0	4	69.8
Smith	10	66.5	17	112.2	....	....	....	....	5	33.3	....	....	8	53.0	2	13.2
Stafford	7	61.0	5	44.3	....	....	....	....	5	43.5	....	....	20	175.0	2	17.7
Stanton	....	....	....	....	....	....	....	....	1	99.9	....	....	....	....	....	....
Stevens	2	52.2	2	49.2	....	....	1	24.6	5	131.0	....	....	3	78.5	4	98.5
Sumner, except	10	46.0	9	42.8	2	9.2	2	9.5	10	46.0	....	....	22	101.5	9	42.8
Wellington	7	104.0	8	115.0	....	....	....	....	7	104.0	....	....	15	223.0	2	28.8
Thomas	2	37.1	3	51.5	....	....	....	....	2	37.1	....	....	7	130.0	1	17.1
Trego	3	49.8	6	98.5	1	16.6	....	....	1	16.6	....	....	8	133.0	3	49.2
Wabaunsee	4	36.2	7	65.0	....	....	....	....	8	72.2	1	9.2	7	63.2	4	37.0
Wallace	2	98.5	2	81.5	....	....	....	....	3	147.6	1	40.7	1	49.2	1	40.7
Washington	5	28.8	10	58.5	....	....	3	17.5	10	57.6	2	11.7	11	63.5	8	46.7
Wichita	1	54.8	2	97.5	....	....	....	....	1	54.8	....	....	2	109.7	....	....
Wilson	25	116.5	14	65.7	1	4.6	2	9.4	13	60.5	3	14.1	34	158.5	12	56.2
Woodson	5	54.7	3	33.3	....	....	....	....	9	98.6	1	11.1	13	142.0	4	44.5
Wyandotte, except	11	90.5	6	48.6	....	....	2	16.2	5	41.1	2	16.2	16	131.5	9	73.0
Kansas City	67	66.1	56	55.5	11	10.8	23	22.4	98	96.8	9	8.7	207	204.4	98	95.5
Rosedale	11	140.0	3	38.0	....	....	....	....	8	101.5	2	25.3	25	318.0	7	88.2

TABLE No. 5. Showing populations, births and birth rates per 1,000 population, by counties, 1920 and 1921.

COUNTIES AND CITIES.	1920.			1921.		
	Population.	Births.	Birth rate per 1,000.	Population.	Births.	Birth rate per 1,000.
STATE TOTALS	1,779,936	40,446	22.6	1,792,496	42,493	23.7
Allen, except	16,491	304	18.5	16,526	315	19.0
Iola	9,004	207	23.0	8,872	213	25.0
Anderson	12,647	286	22.6	12,291	273	22.5
Atchison, except	10,773	195	18.1	11,430	221	19.3
Atchison city	14,811	241	16.3	15,280	288	18.8
Barber	9,394	226	24.0	9,263	217	23.4
Barton, except	13,581	301	22.1	13,702	359	26.2
Great Bend	4,821	129	26.4	5,006	147	29.3
Bourbon, except	12,330	275	22.1	12,725	292	22.8
Fort Scott	12,839	243	19.2	12,344	278	22.5
Brown	20,735	427	20.4	20,437	566	27.2
Butler, except	26,834	604	22.3	25,739	651	25.2
Augusta	4,185	160	38.2	4,338	142	32.6
El Dorado	11,267	336	29.8	11,284	321	28.8
Chase	6,256	163	26.0	6,755	172	25.4
Chautauqua	11,568	275	23.8	11,843	296	25.0
Cherokee, except	30,391	753	24.8	30,473	661	21.6
Galena	4,758	96	20.0	4,712	96	20.3
Cheyenne	5,731	177	31.0	5,780	189	32.6
Clark	5,021	110	21.8	4,880	136	27.6
Clay	15,697	314	20.0	15,630	315	20.1
Cloud, except	12,720	289	22.8	12,888	277	22.5
Concordia	4,758	122	25.6	4,641	122	26.2
Coffey	15,017	319	21.1	15,029	323	21.4
Comanche	5,136	121	23.4	5,062	138	27.2
Cowley, except	16,092	310	19.3	14,906	313	20.8
Arkansas City	11,555	321	27.8	11,513	310	26.8
Winfield	8,816	192	21.4	8,931	197	22.0
Crawford, except	43,037	936	21.7	42,719	1,049	26.0
Pittsburg	18,111	295	16.3	18,074	419	23.2
Decatur	8,015	199	25.2	8,063	209	25.8
Dickinson	26,389	557	21.2	25,320	610	24.0
Doniphan	15,249	359	23.4	15,279	342	22.4
Douglas, except	11,628	230	19.8	11,612	188	16.6
Lawrence	13,474	249	18.5	13,503	254	19.1
Edwards	6,734	161	23.8	6,808	178	26.0
Elk	10,364	195	18.8	10,239	231	22.6
Ellis	14,180	523	37.0	14,771	553	37.4
Ellsworth	10,075	260	25.8	10,191	287	28.0
Finney	7,736	199	25.7	7,453	224	30.0
Ford, except	9,700	240	24.7	9,164	260	28.2
Dodge City	5,138	165	32.0	6,038	197	32.6
Franklin, except	13,436	246	18.3	12,748	209	16.8
Ottawa	9,545	185	19.4	9,520	189	19.6
Geary, except	5,745	162	28.2	6,330	132	20.8
Junction City	6,449	208	32.2	7,068	174	24.6
Gove	5,009	107	21.4	5,109	149	28.0
Graham	7,488	198	26.4	7,483	221	29.4
Grant	1,142	18	15.7	1,306	21	16.1
Gray	4,251	119	28.0	4,640	145	31.1
Greeley	1,136	33	29.0	1,133	37	32.6
Greenwood	14,674	308	21.0	15,237	373	24.4
Hamilton	2,357	77	32.6	2,488	70	28.2
Harper	13,554	320	23.6	13,473	318	23.6
Harvey, except	10,782	215	20.0	10,842	223	20.5
Newton	9,784	347	35.5	9,773	341	34.7
Haskell	1,305	45	34.4	1,621	33	20.2
Hodgeman	3,752	66	17.6	3,555	99	27.8
Jackson	15,023	323	21.6	15,135	307	20.1
Jefferson	14,297	345	24.1	14,031	301	21.4
Jewell	15,696	343	21.8	15,461	334	21.6
Johnson	17,564	325	18.5	17,890	376	21.0
Kearny	2,532	55	21.3	2,487	61	24.4
Kingman	12,182	377	31.0	11,705	339	28.8
Kiowa	6,017	180	30.0	6,099	153	25.0
Labette, except	18,008	376	20.9	17,754	365	20.5
Parsons	16,932	361	21.2	17,521	329	18.7
Lane	2,586	107	41.3	2,702	77	28.4
Leavenworth, except	20,380	306	15.0	20,857	277	13.2
Leavenworth city	19,969	312	15.6	20,009	364	18.2

TABLE No. 5.—CONCLUDED.—Showing populations, births and birth rates per 1,000 population, by counties, 1920 and 1921.

COUNTIES AND CITIES.	1920.			1921.		
	Population.	Births.	Birth rate per 1,000.	Population.	Births.	Birth rate per 1,000.
Lincoln	10,014	268	26.8	10,011	243	24.1
Linn	15,059	314	20.8	15,176	309	20.4
Logan	3,521	64	18.2	3,618	84	23.0
Lyon, except	14,777	325	22.0	14,472	315	21.6
Emporia	11,537	272	23.5	12,024	281	23.2
Marion	24,302	642	26.4	25,948	624	24.0
Marshall	22,748	511	22.4	22,467	556	24.6
McPherson	21,361	466	21.8	21,331	467	21.8
Meade	5,414	158	29.2	5,339	156	29.2
Miami	18,033	387	21.4	18,743	402	21.4
Mitchell	13,560	280	20.6	13,055	321	24.6
Montgomery, except	23,717	564	23.8	24,602	568	23.0
Coffeyville	12,664	296	23.3	12,577	295	23.5
Independence	16,569	424	25.6	16,067	359	22.4
Morris	12,003	282	23.5	12,046	223	18.5
Morton	3,305	93	28.1	3,227	106	32.6
Nemaha	18,435	331	18.0	18,457	423	23.0
Neosho, except	13,432	286	21.3	12,976	299	23.0
Chanute	10,630	292	27.5	11,079	284	26.0
Ness	7,123	180	25.3	7,466	211	28.1
Norton	11,227	232	20.6	11,467	312	27.2
Osage	20,176	395	19.6	20,021	359	17.9
Osborne	12,516	312	24.9	12,765	354	27.6
Ottawa	10,553	252	23.9	10,591	232	21.9
Pawnee	8,914	238	26.6	8,653	237	27.4
Phillips	12,222	270	22.0	12,743	328	25.7
Pottawatomie	15,495	347	22.4	15,180	386	25.4
Pratt	12,516	340	27.2	12,809	295	23.0
Rawlins	6,333	158	25.0	6,370	184	28.8
Reno, except	21,696	471	21.7	20,970	550	26.2
Hutchinson	26,798	565	21.2	27,016	596	22.0
Republic	15,470	291	18.8	15,901	322	20.3
Rice	14,647	321	21.9	13,997	345	24.6
Riley, except	9,531	192	20.1	9,609	224	23.1
Manhattan	7,485	187	24.9	6,706	201	29.8
Rooks	9,760	186	19.0	10,147	229	22.6
Rush	8,399	229	27.2	8,133	299	36.6
Russell	10,579	275	26.0	10,979	279	25.4
Saline, except	9,881	189	19.1	9,799	209	21.2
Salina	15,104	360	23.8	15,401	408	26.4
Scott	3,124	69	22.7	3,362	109	33.4
Sedgwick, except	20,395	461	22.6	19,675	434	22.3
Wichita	77,061	1,675	21.7	79,571	1,793	22.5
Seward	6,327	216	34.2	6,265	197	31.4
Shawnee, except	19,137	389	20.3	20,386	362	17.8
Topeka	50,022	1,130	22.5	49,600	1,253	25.3
Sheridan	5,510	132	24.0	5,667	177	31.2
Sherman	5,638	123	21.9	5,729	134	23.4
Smith	15,021	348	23.2	15,127	341	22.5
Stafford	11,426	291	25.4	11,257	276	24.5
Stanton	1,025	26	25.9	1,008	19	17.7
Stevens	3,802	82	21.6	4,060	136	33.4
Sumner, except	21,651	549	25.3	21,002	494	23.4
Wellington	6,713	158	23.5	6,944	207	29.8
Thomas	5,382	186	34.5	5,824	171	29.4
Trego	6,006	139	23.1	6,088	158	26.0
Wabaunsee	11,055	250	22.6	10,789	258	24.0
Wallace	2,147	53	24.6	2,452	76	31.0
Washington	17,348	371	21.4	17,104	392	22.8
Wichita	1,823	44	24.1	1,947	57	29.3
Wilson	21,439	490	22.9	21,273	615	28.8
Woodson	9,112	204	22.5	9,000	185	20.5
Wyandotte, except	12,151	180	14.8	12,313	254	20.6
Kansas City	101,233	2,266	22.4	102,736	2,407	23.4
Rosedale	7,872	181	23.0	7,888	267	33.8

TABLE No. 6A. Showing the births by counties, by sex, color, and parent nativity, 1920.

Counties and Cities.	Sex.		Color.			Nativity.			
						Father.		Mother.	
	Male.	Female.	White.	Black.	Indian.	Native.	Foreign.	Native.	Foreign.
State Totals	20,774	19,672	39,365	1,048	33	37,457	2,989	38,126	2,320
Allen, except	165	139	293	11	....	292	12	294	10
Iola	96	111	200	7	....	200	7	204	3
Anderson	147	139	284	2	....	277	9	281	5
Atchison, except	92	103	190	5	....	191	4	193	2
Atchison city	129	112	232	9	....	224	17	232	9
Barber	120	106	226	....	....	210	16	214	12
Barton, except	153	148	299	2	....	258	43	271	30
Great Bend	67	62	120	9	....	121	8	122	7
Bourbon, except	136	139	273	2	....	271	4	271	4
Fort Scott	131	112	230	13	....	238	5	240	3
Brown	215	212	409	12	6	393	34	405	22
Butler, except	323	281	604	....	....	583	21	590	14
Augusta	87	73	160	....	....	154	6	154	6
El Dorado	159	177	334	2	....	327	9	328	8
Chase	89	74	163	....	....	152	11	152	11
Chautauqua	144	131	270	3	2	272	3	273	2
Cherokee, except	390	363	737	15	1	698	55	703	50
Galena	64	32	95	1	....	93	3	95	1
Cheyenne	75	102	177	....	....	151	26	165	12
Clark	58	52	110	....	....	106	4	105	5
Clay	164	150	314	....	....	291	23	302	12
Cloud, except	149	140	289	....	....	279	10	283	6
Concordia	55	67	122	....	....	119	3	119	3
Coffey	179	140	318	1	....	305	14	304	15
Comanche	65	56	121	....	....	119	2	120	1
Cowley, except	170	140	309	1	....	301	9	298	12
Arkansas City	177	144	298	19	4	308	13	310	11
Winfield	93	99	186	6	....	182	10	183	9
Crawford, except	479	457	928	8	....	655	281	717	219
Pittsburg	154	141	288	6	1	276	19	290	5
Decatur	109	90	199	....	....	194	5	198	1
Dickinson	278	279	554	3	....	517	40	521	36
Doniphan	180	179	353	6	....	352	7	357	2
Douglas, except	124	106	221	9	....	223	7	228	2
Lawrence	132	117	230	19	....	245	4	243	6
Edwards	77	84	161	....	....	149	12	155	6
Elk	111	84	194	1	....	186	9	187	8
Ellis	269	254	522	1	....	448	75	466	57
Ellsworth	143	117	258	2	....	234	26	235	25
Finney	107	92	193	6	....	181	18	184	15

TABLE No. 6A.—CONCLUDED.—Showing the births by counties, by sex, color, and parent nativity, 1920.

COUNTIES AND CITIES.	Sex.		Color.			Nativity.			
						Father.		Mother.	
	Male.	Female.	White.	Black.	Indian.	Native.	Foreign.	Native.	Foreign.
Ford, except	118	122	240			207	33	214	26
Dodge City	86	79	162	3		157	8	156	9
Franklin, except	117	129	244	1	1	241	5	242	4
Ottawa	90	95	179	6		177	8	180	5
Geary, except	76	86	160	2		148	14	152	10
Junction City	92	116	197	11		191	17	196	12
Gove	56	51	106	1		95	12	95	12
Graham	105	93	187	11		182	16	193	5
Grant	10	8	18			18		18	
Gray	62	57	118	1		109	10	114	5
Greeley	21	12	33			32	1	32	1
Greenwood	150	158	308			305	3	307	1
Hamilton	39	38	76	1		74	3	75	2
Harper	154	166	317	3		319	1	319	1
Harvey, except	120	95	215			194	21	201	14
Newton	169	178	331	16		306	41	311	36
Haskell	30	15	45			44	1	44	1
Hodgeman	43	23	64	2		65	1	63	3
Jackson	172	151	314	2	7	309	14	313	10
Jefferson	159	186	338	7		335	10	336	9
Jewell	170	173	343			337	6	339	4
Johnson	173	152	315	10		291	34	294	31
Kearny	27	28	55			47	8	49	6
Kingman	184	193	376	1		364	13	368	9
Kiowa	87	93	180			173	7	177	3
Labette, except	197	179	360	15	1	369	7	372	4
Parsons	181	180	323	38		337	24	359	2
Lane	60	47	107			103	4	105	2
Leavenworth, except	155	151	297	9		297	9	296	10
Leavenworth city	165	147	271	41		283	29	295	17
Lincoln	145	123	268			256	12	263	5
Linn	162	152	308	6		307	7	312	2
Logan	29	35	59	5		62	2	62	2
Lyon, except	169	156	321	4		306	19	316	9
Emporia	139	133	263	9		258	14	260	12
Marion	351	291	635	7		545	97	578	64
Marshall	285	226	508	3		491	20	490	21
McPherson	233	233	466			425	41	438	28
Meade	85	73	157	1		151	7	153	5
Miami	206	181	374	13		374	13	377	10
Mitchell	139	141	280			268	12	276	4

Montgomery, except	286	278	547	15	2	530	34	532	32
Coffeyville	217	207	379	44	1	408	16	414	10
Independence	164	132	272	23	1	283	13	292	4
Morris	155	127	275	7		267	15	273	9
Morton	53	40	93			90	3	92	1
Nemaha	158	173	327	4		308	23	316	15
Neosho, except	142	144	285	1		277	9	282	4
Chanute	155	137	281	11		277	15	280	12
Ness	101	79	180			162	18	166	14
Norton	8	8	16			16		16	
Osage	194	201	390	5		367	28	373	22
Osborne	162	150	312			305	7	310	2
Ottawa	117	135	252			238	14	243	9
Pawnee	122	116	235	3		230	8	232	6
Phillips	134	136	270			265	5	263	7
Pottawatomie	174	173	342	2	3	325	22	332	15
Pratt	180	160	330	10		331	9	332	8
Rawlins	83	75	158			142	16	146	12
Reno, except	239	232	471			444	27	455	16
Hutchinson	270	295	541	24		537	28	545	20
Republic	145	146	291			270	21	276	15
Rice	166	155	314	7		298	23	300	21
Riley, except	97	95	192			177	15	185	7
Manhattan	98	89	182	5		181	6	178	9
Rooks	81	105	186			180	6	183	3
Rush	125	104	229			177	52	202	27
Russell	133	142	274	1		233	42	244	31
Saline, except	99	90	189			176	13	178	11
Salina	190	170	348	12		342	18	343	17
Scott	37	32	69			63	6	64	5
Sedgwick, except	236	225	457	4		432	29	440	21
Wichita	856	819	1,579	94	2	1.586	89	1,592	83
Seward	107	109	216			213	3	211	5
Shawnee, except	214	175	380	8	1	372	17	372	17
Topeka	609	521	1,051	79		964	166	987	143
Sheridan	77	55	131	1		122	10	125	7
Sherman	69	54	123			119	4	123	
Smith	188	160	348			339	9	342	6
Stafford	130	161	287	4		291		286	5
Stanton	17	9	26			26		26	
Stevens	44	38	80	2		82		82	
Sumner, except	257	292	548	1		533	16	537	12
Wellington	90	68	154	4		149	9	149	9
Thomas	97	89	185	1		186		186	
Trego	70	69	139			106	33	114	25
Wabaunsee	111	139	36	14		229	21	237	13
Wallace	26	27	52	1		50	2	49	3
Washington	199	172	371			355	16	360	11
Wichita	24	20	44			40	4	43	1
Wilson	242	248	486	4		481	9	485	5
Woodson	107	97	202	2		198	6	200	4
Wyandotte, except	92	88	169	11		165	15	163	17
Kansas City	1,144	1,122	2,047	219		1,810	456	1,887	379
Rosedale	92	89	164	17		172	9	172	9

TABLE No. 6B. Showing the births by counties, by sex, color, and parent nativity, 1921.

Counties and Cities	Sex.		Color.			Nativity of—			
						Father.		Mother.	
	Male.	Female.	White.	Black.	Indian.	Native.	Foreign.	Native.	Foreign.
State Totals	21,821	20,672	41,353	1,104	36	39,413	3,080	40,086	2,407
Allen, except	174	141	309	5	1	305	10	310	5
Iola	114	99	207	6		211	2	212	1
Anderson	151	122	273			267	6	270	3
Atchison, except	120	101	217	4		213	8	217	4
Atchison city	147	141	265	23		270	18	273	15
Barber	104	113	216	1		205	12	206	11
Barton, except	173	186	356	3		305	54	313	46
Great Bend	75	72	137	8	2	139	8	137	10
Bourbon, except	156	136	289	3		290	2	291	1
Fort Scott	156	122	266	12		271	7	273	5
Brown	295	271	536	18	12	522	44	528	38
Butler, except	345	306	651			637	14	641	10
Augusta	70	72	142			135	7	136	6
El Dorado	166	155	312	9		306	15	308	13
Chase	67	105	169	2	1	164	8	164	8
Chautauqua	149	147	290	1	5	293	3	292	4
Cherokee, except	330	331	652	9		613	48	626	35
Galena	45	51	95	1		93	3	92	4
Cheyenne	101	88	189			165	24	178	11
Clark	78	58	136			131	5	131	5
Clay	150	165	315			295	20	308	7
Cloud, except	140	137	277			264	13	271	6
Concordia	62	60	122			120	2	119	3
Coffey	174	149	323			315	8	318	5
Comanche	81	57	138			134	4	132	6
Cowley, except	142	171	308	4	1	309	4	310	3
Arkansas City	158	152	299	10	1	298	12	298	12
Winfield	106	91	188	9		192	5	194	3
Crawford, except	523	526	1,022	27		744	305	810	239
Pittsburg	200	219	408	11		390	29	400	19
Decatur	121	88	209			202	7	206	3
Dickinson	310	300	607	3		556	54	567	43
Doniphan	171	171	329	12	1	332	10	334	8
Douglas, except	107	81	179	9		184	4	186	2
Lawrence	122	132	230	23	1	243	11	247	7
Edwards	88	90	177	1		167	11	166	12
Elk	126	105	231			227	4	228	3
Ellis	277	276	551	2		474	79	495	58
Ellsworth	143	144	283	4		253	34	266	21
Finney	114	110	217	7		197	27	195	29

Ford, except	133	127	260	...	...	226	34	228	32
Dodge City	102	95	196	1	...	185	12	187	10
Franklin, except	93	116	206	3	...	203	6	205	4
Ottawa	100	89	182	7	...	180	9	180	9
Geary, except	72	60	129	3	...	131	1	130	2
Junction City	79	95	167	7	...	159	15	163	11
Gove	86	63	149	...	...	130	19	135	14
Graham	115	106	210	11	...	200	21	210	11
Grant	9	12	20	1	...	21	...	21	...
Gray	74	71	145	...	...	138	7	138	7
Greeley	13	24	37	...	...	34	3	33	4
Greenwood	206	167	372	1	...	367	6	369	4
Hamilton	41	29	70	...	...	65	5	66	4
Harper	155	163	317	1	...	308	10	308	10
Harvey, except	127	96	223	...	...	207	16	213	10
Newton	185	156	330	11	...	308	33	311	30
Haskell	19	14	33	...	...	31	2	31	2
Hodgeman	50	49	95	3	1	91	8	95	4
Jackson	161	146	300	1	6	296	11	298	9
Jefferson	154	147	292	8	1	294	7	294	7
Jewell	179	155	334	...	...	326	8	333	1
Johnson	192	184	372	4	...	345	31	349	27
Kearny	36	25	61	...	...	52	9	53	8
Kingman	180	159	339	...	...	326	13	330	9
Kiowa	82	71	153	...	...	152	1	152	1
Labette, except	179	186	358	7	...	360	5	361	4
Parsons	175	154	298	31	...	308	21	312	17
Lane	39	38	77	...	...	74	3	76	1
Leavenworth, except	150	127	269	8	...	268	9	273	4
Leavenworth city	186	178	332	32	...	324	40	345	19
Lincoln	117	126	243	...	...	236	7	231	12
Linn	162	147	304	5	...	306	3	308	1
Logan	52	32	82	2	...	78	6	79	5
Lyon, except	158	157	311	4	...	300	15	305	10
Emporia	138	143	271	10	...	257	24	254	27
Marion	326	298	623	1	...	527	97	558	66
Marshall	285	271	552	4	...	523	33	531	25
McPherson	221	246	467	...	...	426	41	440	27
Meade	74	82	156	...	...	147	9	153	3
Miami	203	199	390	12	...	389	13	393	9
Mitchell	158	163	321	...	...	305	16	314	7
Montgomery, except	295	273	555	12	1	528	40	535	33
Coffeyville	182	177	316	43	...	349	10	353	6
Independence	157	138	270	25	...	282	13	285	10
Morris	113	110	221	2	...	214	9	216	7
Morton	51	55	106	...	...	106	...	106	...
Nemaha	202	221	417	6	...	400	23	404	19
Neosho, except	149	150	298	1	...	295	4	294	5
Chanute	150	134	269	15	...	269	15	269	15
Ness	109	102	211	...	...	178	33	180	31
Norton	158	154	312	...	...	304	8	308	4
Osage	194	165	356	3	...	345	14	347	12
Osborne	157	197	354	...	...	341	13	348	6
Ottawa	120	112	232	...	...	230	2	228	4
Pawnee	121	116	235	2	...	220	17	225	12
Phillips	180	148	326	2	...	309	19	313	15

TABLE No. 6B.—CONCLUDED.—Showing the births by counties, by sex, color, and parent nativity, 1921.

COUNTIES AND CITIES.	Sex		Color.			Nativity of—			
						Father.		Mother.	
	Male.	Female.	White.	Black.	Indian.	Native.	Foreign.	Native.	Foreign.
Pottawatomie	206	180	384	1	1	364	22	373	13
Pratt	140	155	287	8		287	8	287	8
Rawlins	93	91	184			168	16	173	11
Reno, except	307	243	549	1		534	16	540	10
Hutchinson	287	309	575	21		566	30	584	12
Republic	163	159	321	1		306	16	311	11
Rice	195	150	343	2		319	26	319	26
Riley, except	110	114	224			213	11	218	6
Manhattan	108	93	194	7		190	11	193	8
Rooks	112	117	228	1		220	9	225	4
Rush	157	142	299			241	58	247	52
Russell	135	144	276	3		226	53	243	36
Saline, except	97	112	208	1		202	7	203	6
Salina	211	197	387	21		390	18	388	20
Scott	60	49	109			102	7	106	3
Sedgwick, except	227	207	433	1		403	31	417	17
Wichita	909	884	1,718	74	1	1,691	102	1,702	91
Seward	96	101	197			194	3	196	1
Shawnee, except	189	173	353	9		337	25	340	22
Topeka	653	600	1,175	78		1,081	172	1,123	130
Sheridan	100	77	177			169	8	171	6
Sherman	63	71	134			126	8	127	7
Smith	166	175	341			337	4	335	6
Stafford	135	141	273	3		272	4	271	5
Stanton	12	7	19			19		19	
Stevens	66	70	135	1		135	1	134	2
Sumner, except	257	237	492	2		478	16	478	16
Wellington	99	108	202	5		195	12	196	11
Thomas	97	74	170	1		166	5	169	2
Trego	80	78	157	1		115	43	130	28
Wabaunsee	139	119	245	13		240	18	246	12
Wallace	41	35	74	2		71	5	72	4
Washington	192	200	392			371	21	385	7
Wichita	25	32	57			51	6	56	1
Wilson	317	298	613	2		603	12	602	13
Woodson	99	86	184	1		182	3	182	3
Wyandotte, except	132	122	229	25		222	32	225	29
Kansas City	1,264	1,143	2,139	268		1,966	441	2,022	385
Rosedale	147	120	232	35		257	10	254	13

TABLE No. 7. Showing comparison of birth rates per 1,000 population, by counties, for the five-year period, 1917 to 1921, inclusive.

COUNTIES AND CITIES.	1921.	1920.	1919.	1918.	1917.
STATE TOTALS	23.7	22.6	21.1	22.9	22.2
Allen, except	19.0	18.5	17.5	16.9	15.1
Iola	25.0	23.0	16.4	21.3	....
Anderson	22.5	22.6	18.7	21.6	20.9
Atchison, except	19.3	18.1	15.5	18.5	16.4
Atchison city	18.8	16.3	14.8	15.2	13.3
Barber	23.4	24.0	23.8	26.1	22.7
Barton, except	26.2	22.1	21.9	27.0	26.1
Great Bend	29.3	26.4	15.8	18.6	....
Bourbon, except	22.8	22.1	18.9	21.2	17.6
Fort Scott	22.5	19.2	19.0	18.7	15.4
Brown	27.2	20.4	19.4	22.5	22.9
Butler, except	25.2	22.3	21.5	20.8	25.9
Augusta	32.6	38.2	38.4	31.7	....
El Dorado	28.8	29.8	20.7	15.6	....
Chase	25.4	26.0	21.6	26.9	20.3
Chautauqua	25.0	23.8	21.8	20.1	21.6
Cherokee, except	21.6	24.8	19.5	24.8	24.9
Galena	20.3	20.0	22.7	28.4	....
Cheyenne	32.6	31.0	28.5	30.4	29.7
Clark	27.6	21.8	21.9	26.4	29.9
Clay	20.1	20.0	20.4	22.6	22.4
Cloud, except	22.5	22.8	19.7	19.6	23.9
Concordia	26.2	25.6	22.7	25.5	....
Coffey	21.4	21.1	20.0	18.7	19.3
Comanche	27.2	23.4	21.4	16.8	23.9
Cowley, except	20.8	19.3	17.5	23.0	20.6
Arkansas City	26.8	27.8	21.2	25.6	....
Winfield	22.0	21.4	24.3	22.3	....
Crawford, except	26.0	21.7	23.3	24.5	21.1
Pittsburg	23.2	16.3	16.0	18.8	16.7
Decatur	25.8	25.2	24.4	25.0	24.2
Dickinson	24.0	21.2	21.4	22.0	20.7
Doniphan	22.4	23.4	19.1	17.8	20.7
Douglas, except	16.6	19.8	11.8	17.2	18.5
Lawrence	19.1	18.5	14.0	14.2	15.1
Edwards	26.0	23.8	25.7	26.3	25.7
Elk	22.6	18.8	14.5	20.6	25.9
Ellis	37.4	37.0	17.8	32.4	31.3
Ellsworth	28.0	25.8	21.6	25.7	24.2
Finney	30.0	25.7	20.9	26.1	24.6
Ford, except	28.2	24.7	25.9	23.0	32.0
Dodge City	32.6	32.0	34.4	32.7	....
Franklin, except	16.8	18.3	13.9	17.5	16.5
Ottawa	19.6	19.4	19.8	17.7	....
Geary, except	20.8	28.2	18.1	25.0	21.7
Junction City	24.6	32.2	25.1	23.1	....
Gove	28.0	21.4	18.9	28.0	33.7
Graham	29.4	26.4	24.5	27.6	29.3
Grant	16.1	15.7	17.4	18.3	14.7
Gray	31.1	28.0	28.0	28.4	32.5
Greeley	32.6	29.0	5.1	14.9	16.9
Greenwood	24.4	21.0	20.5	23.2	20.0
Hamilton	28.2	32.6	27.1	32.0	23.4
Harper	23.6	23.6	21.2	24.7	20.1
Harvey, except	20.5	20.0	21.3	21.5	27.5
Newton	34.7	35.5	40.0	25.6	....
Haskell	20.2	34.4	32.8	30.3	44.9
Hodgeman	27.8	17.6	27.7	27.2	28.1
Jackson	20.1	21.6	19.8	21.4	21.2
Jefferson	21.4	24.1	18.7	20.3	18.3
Jewell	21.6	21.8	17.6	21.8	24.1
Johnson	21.0	18.5	14.8	14.3	14.8
Kearny	24.4	21.3	22.0	22.4	23.9
Kingman	28.8	31.0	22.3	24.5	26.7
Kiowa	25.0	30.0	25.0	26.3	32.6
Labette, except	20.5	20.9	19.4	20.0	19.2
Parsons	18.7	21.2	19.3	19.5	18.8
Lane	28.4	41.3	28.6	34.0	39.7
Leavenworth, except	13.2	15.0	11.6	14.6	14.8
Leavenworth city	18.2	15.6	14.3	15.5	14.2

TABLE No. 7—CONCLUDED. Birth rates, 1917 to 1921.

COUNTIES AND CITIES.	1921.	1920.	1919.	1918.	1917.
Lincoln	24.1	26.8	19.7	24.3	23.6
Linn	20.4	20.8	18.3	19.2	10.9
Logan	23.0	18.2	16.8	24.1	15.1
Lyon, except	21.6	22.0	19.5	21.9	21.3
Emporia	23.2	23.5	22.2	23.0	....
Marion	24.0	26.4	21.2	24.2	21.2
Marshall	24.6	22.4	18.9	21.9	20.9
McPherson	21.8	21.8	18.7	22.8	23.0
Meade	29.2	29.2	28.1	23.2	26.7
Miami	21.4	21.4	18.4	17.2	17.7
Mitchell	24.6	20.6	19.3	20.6	25.0
Montgomery, except	23.0	23.8	21.9	22.5	22.0
Coffeyville	23.5	23.3	15.8	18.6	25.0
Independence	22.4	25.6	26.8	31.0	19.5
Morris	18.5	23.5	20.0	20.3	25.0
Morton	32.6	28.1	19.2	26.6	21.2
Nemaha	23.0	18.0	19.2	20.0	21.2
Neosho, except	23.0	21.3	22.2	21.6	20.2
Chanute	26.0	27.5	21.4	24.8	....
Ness	28.1	25.3	26.8	28.6	27.2
Norton	27.2	20.6	17.6	21.0	23.5
Osage	17.9	19.6	16.1	13.3	12.3
Osborne	27.6	24.9	21.2	24.4	23.2
Ottawa	21.9	23.9	18.1	20.5	24.1
Pawnee	27.4	26.6	26.8	24.4	26.7
Phillips	25.7	22.0	20.9	19.8	21.8
Pottawatomie	25.4	22.4	22.0	23.7	20.0
Pratt	23.0	27.2	21.9	25.7	23.0
Rawlins	28.8	25.0	24.5	26.0	28.7
Reno, except	26.2	21.7	21.7	18.3	26.2
Hutchinson	22.0	21.2	18.1	18.8	19.8
Republic	20.3	18.8	20.2	18.3	21.8
Rice	24.6	21.9	21.5	23.2	21.2
Riley, except	23.1	20.1	17.8	22.5	21.6
Manhattan	29.8	24.9	22.1	26.4	....
Rooks	22.6	19.0	18.7	20.9	23.0
Rush	36.6	27.2	22.7	31.8	33.9
Russell	25.4	26.0	23.8	21.9	27.3
Saline, except	21.2	19.1	20.5	21.8	21.7
Salina	26.4	23.8	21.4	26.2	....
Scott	33.4	22.7	19.4	25.1	22.1
Sedgwick, except	22.3	22.6	21.5	22.1	21.4
Wichita	22.5	21.7	21.9	23.7	25.0
Seward	31.4	34.2	27.4	28.5	26.1
Shawnee, except	17.8	20.3	17.0	19.2	19.8
Topeka	25.3	22.5	20.8	26.8	22.6
Sheridan	31.2	24.0	23.9	24.7	27.2
Sherman	23.4	21.9	16.6	23.0	22.2
Smith	22.5	23.2	21.3	23.4	24.0
Stafford	24.5	25.4	23.4	23.7	25.9
Stanton	17.7	25.9	9.6	26.6	14.4
Stevens	33.4	21.6	27.5	27.9	20.0
Sumner, except	23.4	25.3	19.4	23.7	24.6
Wellington	29.8	23.5	22.2	22.2	....
Thomas	29.4	34.5	26.7	26.0	30.0
Trego	26.0	23.1	24.1	26.5	27.3
Wabaunsee	24.0	22.6	21.4	23.3	21.3
Wallace	31.0	24.6	26.3	21.2	33.4
Washington	22.8	21.4	22.5	21.7	23.1
Wichita	29.3	24.1	22.5	20.3	9.3
Wilson	28.8	22.9	25.6	21.0	21.6
Woodson	20.5	22.5	20.1	21.0	18.5
Wyandotte, except	20.6	14.8	14.5	19.7	19.9
Kansas City	23.4	22.4	21.3	20.6	22.6
Rosedale	33.8	23.0	17.1	19.0	....

TABLE No. 8. Showing number of births, deaths of children under one year and infant mortality rate, by counties, 1920 and 1921.

Counties and Cities.	1920.			1921.		
	Births.	Deaths under 1 year.	Infant mortality rate.	Births.	Deaths under 1 year.	Infant mortality rate.
State Totals	40,446	2,975	73.5	42,493	2,623	61.6
Allen, except	304	19	62.5	315	23	73.0
Iola	207	20	96.6	213	15	70.0
Anderson	286	27	94.4	273	15	54.9
Atchison, except	195	9	46.1	221	14	63.3
Atchison city	241	20	82.9	288	23	79.7
Barber	226	29	128.3	217	11	50.6
Barton, except	301	24	88.0	359	18	50.1
Great Bend	129	7	54.2	147	10	68.0
Bourbon, except	275	13	47.2	292	16	54.7
Fort Scott	243	33	135.8	278	23	83.0
Brown	427	32	75.0	566	24	42.5
Butler, except	604	33	54.7	651	39	60.0
Augusta	160	19	118.7	142	11	77.5
El Dorado	336	26	77.5	321	18	56.0
Chase	163	14	86.0	172	3	17.4
Chautauqua	275	28	101.8	296	21	70.9
Cherokee, except	753	52	69.0	661	44	66.5
Galena	96	5	52.1	96	4	41.6
Cheyenne	177	13	73.4	189	12	63.5
Clark	110	5	45.4	136	4	28.4
Clay	314	9	60.4	315	16	51.0
Cloud, except	289	22	76.2	277	17	61.4
Concordia	122	11	82.6	122	7	57.3
Coffey	319	14	75.4	323	19	58.0
Comanche	121	11	83.4	138	4	29.0
Cowley, except	310	18	58.0	313	17	54.3
Arkansas City	321	19	59.0	310	17	54.7
Winfield	192	19	99.0	197	10	50.7
Crawford, except	936	77	82.5	1,049	73	69.5
Pittsburg	295	21	71.2	419	25	59.6
Decatur	199	12	60.2	209	18	86.1
Dickinson	557	36	64.5	610	45	73.7
Doniphan	359	24	67.0	342	23	67.2
Douglas, except	230	8	47.0	188	7	37.2
Lawrence	249	13	52.5	254	25	98.4
Edwards	161	10	68.4	178	9	50.5
Elk	195	9	56.0	231	8	34.6
Ellis	523	36	68.8	553	50	90.4
Ellsworth	260	17	65.4	287	13	45.3
Finney	199	23	115.5	224	18	80.3
Ford, except	240	20	83.3	260	12	46.1
Dodge City	165	19	115.0	197	15	76.1
Franklin, except	246	20	81.2	209	9	43.0
Ottawa	185	12	65.0	189	10	52.9
Geary, except	162	10	61.5	132	7	53.0
Junction City	208	13	62.5	174	14	80.4
Gove	107	10	93.5	149	12	80.5
Graham	198	10	50.5	221	11	49.8
Grant	18	2	111.1	21	....	....
Gray	119	8	90.7	145	11	75.8
Greeley	33	3	77.5	37	1	27.0
Greenwood	308	12	39.0	373	23	61.6
Hamilton	77	5	59.3	70	7	100.0
Harper	320	15	46.8	318	15	47.1
Harvey, except	215	16	74.5	223	11	67.2
Newton	347	30	86.5	341	24	70.3
Haskell	45	3	66.6	33	3	90.9
Hodgeman	66	6	91.0	99	3	30.3
Jackson	323	20	61.4	307	22	71.6
Jefferson	345	13	37.6	301	20	66.4
Jewell	343	16	46.2	334	16	47.9
Johnson	325	17	52.2	376	25	66.4
Kearny	55	4	72.6	61	4	65.5
Kingman	377	26	69.0	339	18	53.1
Kiowa	180	16	88.6	153	12	78.4
Labette, except	376	26	69.1	365	21	57.5
Parsons	361	30	83.1	329	22	66.8
Lane	107	4	37.3	77	2	25.9
Leavenworth, except	306	10	32.8	277	13	46.9
Leavenworth city	312	25	80.0	364	30	82.4

TABLE No. 8—CONCLUDED.

COUNTIES AND CITIES.	1920.			1921.		
	Births.	Deaths under 1 year.	Infant mortality rate.	Births.	Deaths under 1 year.	Infant mortality rate.
Lincoln	268	12	44.8	243	11	45.2
Linn	314	13	41.4	309	18	58.2
Logan	64	8	125.0	84	8	95.2
Lyon, except	325	26	80.0	315	13	41.2
Emporia	272	22	80.3	281	19	67.6
Marion	642	52	81.0	624	46	73.7
Marshall	511	24	46.8	556	37	66.5
McPherson	466	30	64.3	467	19	40.7
Meade	158	5	31.6	156	9	57.7
Miami	387	36	93.0	402	28	69.6
Mitchell	280	16	57.2	321	22	68.5
Montgomery, except	564	49	87.0	568	47	82.7
Coffeyville	296	17	57.5	359	17	57.6
Independence	424	39	68.5	295	27	75.2
Morris	282	20	71.0	223	15	67.2
Morton	93	5	53.7	106	4	37.7
Nemaha	331	20	60.2	423	14	33.0
Neosho, except	286	17	59.4	299	17	56.8
Chanute	292	26	89.0	284	25	88.0
Ness	180	12	66.7	211	20	94.7
Norton	232	15	64.0	312	17	54.5
Osage	395	16	40.5	359	22	63.8
Osborne	312	14	44.8	354	20	56.5
Ottawa	252	8	31.7	232	13	56.0
Pawnee	238	14	58.7	237	19	80.1
Phillips	270	17	63.0	328	12	36.6
Pottawatomie	347	24	69.0	386	11	28.5
Pratt	340	20	58.6	295	16	54.2
Rawlins	158	13	82.3	184	17	92.4
Reno, except	471	26	55.2	550	24	43.6
Hutchinson	565	56	81.4	596	36	60.4
Republic	291	17	58.4	322	16	49.7
Rice	321	22	68.5	345	23	66.5
Riley, except	192	6	31.2	224	10	44.6
Manhattan	187	10	55.5	201	10	49.5
Rooks	186	9	48.4	229	11	48.0
Rush	229	20	87.7	299	17	56.8
Russell	275	17	69.0	279	20	71.5
Saline, except	189	11	58.2	209	11	52.6
Salina	360	23	63.8	408	21	51.4
Scott	69	7	101.5	109	5	45.7
Sedgwick, except	461	31	67.2	434	16	36.8
Wichita	1,675	157	93.6	1,793	131	73.0
Seward	216	19	88.0	197	14	71.0
Shawnee, except	389	26	67.0	362	15	86.5
Topeka	1,130	105	93.0	1,253	107	85.3
Sheridan	132	15	113.7	177	15	84.1
Sherman	123	7	56.9	134	4	29.8
Smith	348	16	46.2	341	13	38.0
Stafford	291	19	65.2	276	18	65.2
Stanton	26	....	....	19	....	....
Stevens	82	7	85.3	136	7	51.4
Sumner, except	549	27	49.2	494	17	34.4
Wellington	158	22	139.2	207	13	62.3
Thomas	186	8	43.0	171	9	52.6
Trego	139	8	57.5	158	10	63.3
Wabaunsee	250	12	48.0	258	11	42.7
Wallace	53	5	94.2	76	3	39.4
Washington	371	20	53.8	392	31	79.0
Wichita	44	....	....	57	3	52.6
Wilson	490	26	53.0	615	37	60.1
Woodson	204	9	43.2	185	7	37.8
Wyandotte, except	180	21	112.2	254	11	43.3
Kansas City	2,266	242	107.0	2,407	175	73.0
Rosedale	181	25	138.1	216	17	63.6

TABLE No. 9. Showing population, marriages and marriage rates per 1,000 population, by counties, 1920 and 1921.

COUNTIES.	1920.			1921.		
	Population.	Marriages.	Marriage rate per 1,000.	Population.	Marriages.	Marriage rate per 1,000.
STATE TOTALS	1,779,936	22,507	25.2	1,792,496	20,249	22.6
Allen	25,495	416	32.6	25,398	314	24.7
Anderson	12,647	130	22.5	12,291	109	17.7
Atchison	25,584	326	25.8	26,710	284	21.2
Barber	9,394	77	16.4	9,263	72	15.5
Barton	18,402	223	24.2	18,708	234	25.0
Bourbon	25,169	337	27.0	25,069	241	19.2
Brown	20,735	190	18.3	20,437	150	14.6
Butler	42,286	407	19.4	41,361	293	14.1
Chase	6,256	84	26.8	6,755	74	21.9
Chautauqua	11,568	116	20.6	11,843	105	17.7
Cherokee	35,149	415	23.6	35,185	371	21.1
Cheyenne	5,731	50	17.4	5,780	27	9.3
Clark	5,021	31	12.6	4,880	41	16.8
Clay	15,697	134	17.5	15,630	145	18.5
Cloud	17,478	192	22.0	17,529	155	17.7
Coffey	15,017	109	14.5	15,029	97	12.9
Comanche	5,136	36	14.1	5,062	39	15.4
Cowley	36,463	586	32.2	35,350	519	29.0
Crawford	61,148	748	24.4	60,793	629	20.7
Decatur	8,015	81	20.2	8,063	72	17.8
Dickinson	26,389	239	18.3	25,320	218	17.2
Doniphan	15,249	138	18.5	15,279	120	15.7
Douglas	25,102	359	28.6	25,115	410	32.6
Edwards	6,734	85	25.3	6,808	79	23.2
Elk	10,364	50	9.6	10,239	71	13.8
Ellis	14,180	199	28.1	14,771	178	24.1
Ellsworth	10,075	106	21.0	10,191	100	19.6
Finney	7,736	121	31.3	7,453	88	23.6
Ford	14,838	222	29.9	15,202	222	29.3
Franklin	22,981	297	25.9	22,268	220	19.7
Geary	12,194	233	38.2	13,398	183	27.4
Gove	5,009	20	7.9	5,109	20	7.8
Graham	7,488	67	17.9	7,483	96	25.6
Grant	1,142	3	5.3	1,306	7	10.7
Gray	4,251	37	17.8	4,640	29	10.2
Greeley	1,136	18	32.3	1,133	9	15.8
Greenwood	14,674	104	14.4	15,237	97	12.7
Hamilton	2,357	50	42.4	2,488	35	28.1
Harper	13,554	159	23.5	13,473	143	21.2
Harvey	20,566	466	45.3	19,606	489	49.8
Haskell	1,305	4	6.2	1,621	16	19.7
Hodgeman	3,752	15	7.8	3,555	19	10.7
Jackson	15,023	153	20.3	15,135	164	21.6
Jefferson	14,297	61	8.5	14,031	49	6.9
Jewell	15,696	119	15.1	15,461	106	13.7
Johnson	17,564	650	74.0	17,890	653	73.0
Kearny	2,532	18	14.2	2,487	14	11.2
Kingman	12,182	103	16.9	11,705	96	16.4
Kiowa	6,017	55	18.6	6,099	75	24.6
Labette	34,940	274	15.6	35,275	287	16.3
Lane	2,586	19	14.7	2,702	20	14.8
Leavenworth	40,349	799	39.6	40,866	734	35.4
Lincoln	10,014	100	20.0	10,011	76	15.2
Linn	15,059	93	12.5	15,176	74	9.7
Logan	3,521	18	10.2	3,618	16	8.8
Lyon	26,314	368	27.9	26,496	262	19.7
Marion	24,302	211	17.2	25,948	206	15.8
Marshall	22,748	217	19.1	22,467	157	13.9
McPherson	21,361	205	19.4	21,331	147	13.8
Meade	5,414	38	14.0	5,339	41	15.3
Miami	18,033	206	22.6	18,743	223	23.8
Mitchell	13,560	142	20.9	13,055	123	18.8
Montgomery	52,950	976	36.9	55,246	729	26.4
Morris	12,003	141	23.4	12,046	115	19.1
Morton	3,305	35	21.2	3,227	30	18.5

TABLE No. 9—CONCLUDED.

COUNTIES.	1920.			1921.		
	Population.	Marriages.	Marriage rate per 1,000.	Population.	Marriages.	Marriage rate per 1,000.
Nemaha	18,435	139	15.1	18,457	131	14.2
Neosho	24,062	183	15.2	24,055	197	16.4
Ness	7,123	64	17.9	7,466	48	12.8
Norton	11,227	158	28.2	11,467	170	29.7
Osage	20,176	103	10.2	20,021	103	10.3
Osborne	12,516	114	18.2	12,765	109	17.0
Ottawa	10,553	70	13.2	10,591	80	15.1
Pawnee	8,914	80	18.0	8,653	88	20.3
Phillips	12,222	144	23.5	12,743	137	29.3
Pottawatomie	15,495	52	6.7	15,180	72	9.5
Pratt	12,516	140	22.3	12,809	128	19.9
Rawlins	6,333	69	21.8	6,370	53	16.6
Reno	48,494	692	28.6	47,986	598	24.9
Republic	15,470	132	17.1	15,901	122	15.3
Rice	14,647	123	16.8	13,997	112	16.0
Riley	17,016	308	36.2	16,315	239	29.3
Rooks	9,760	108	22.1	10,147	99	19.5
Rush	8,399	65	15.9	8,133	79	19.4
Russell	10,579	85	16.1	10,979	91	16.6
Saline	24,985	378	30.2	25,200	369	29.3
Scott	3,124	44	28.2	3,362	29	17.2
Sedgwick	97,456	1,824	37.5	99,246	1,584	31.9
Seward	6,327	140	44.2	6,265	130	41.5
Shawnee	69,159	1,073	31.0	69,986	965	27.6
Sheridan	5,510	52	18.9	5,667	49	17.3
Sherman	5,638	75	26.6	5,729	84	29.3
Smith	15,021	160	21.3	15,127	117	15.4
Stafford	11,426	95	16.6	11,257	90	15.9
Stanton	1,025	2	3.9	1,008	3	5.9
Stevens	3,802	38	20.0	4,060	27	13.3
Sumner	28,264	275	19.4	27,946	316	22.6
Thomas	5,382	88	32.7	5,824	89	30.5
Trego	6,006	87	29.0	6,088	89	29.2
Wabaunsee	11,055	82	14.8	10,789	69	12.8
Wallace	2,147	32	29.6	2,452	28	23.6
Washington	17,348	136	15.6	17,104	111	11.8
Wichita	1,823	7	7.6	1,947	13	13.3
Wilson	21,439	215	20.0	21,273	206	19.4
Woodson	9,112	83	18.2	9,000	63	14.0
Wyandotte	121,256	2,094	34.5	122,937	1,945	31.6

DIVISION OF CHILD HYGIENE.

Report of the Director, 1921.

By Florence Brown Sherbon.

To Dr. S. J. Crumbine, Secretary of the State Board of Health:

Sir—I have the honor to transmit herewith a report of the activities of the Division of Child Hygiene for the year ending June 30, 1921. This activity has centered prominently in the study of the infant and maternal mortality rates of the state and in the instigation and conduct of educational effort designed to raise the general level of maternal intelligence relative to the fundamental factors of child health and safe childbirth.

The vital statistics for the years 1917 to 1920, inclusive, show the following figures:

	1917.	*1918.*	*1919.*	*1920.*
Births	38,611	39,696	37,145	40,446
Stillbirths	1,203	1,378	1,254	1,243
Deaths under one year	3,005	3,118	2,546	2,896
Deaths after birth under one year	1,486	1,567	1,235	1,427
Deaths at birth or from causes operative at birth	1,519	1,551	1,311	1,469
Birth mortality (per cent)	50.5	49	51	50.75
Stillbirths plus birth mortality	2,722	2,929	2,565	2,712
Infant mortality rate per 1,000 live births	68.5	77	67	71
Maternal deaths	259	307	248	253

These figures are creditable for Kansas as compared with other states, particularly in regard to mortality rates reflecting infant care. They are discouragingly stationary, however, in their bearing upon deaths of infants before birth, deaths at birth, and the deaths of mothers at childbirth.

Of the 253 Kansas women who gave their lives in childbirth in 1920, 85 died from puerperal septicemia, 75 from albuminuria or eclampsia, 52 from accidents of pregnancy, 17 from accidents of labor, 19 from hemorrhage, and 5 from other causes following childbirth.

Month by month a third of the women dying in childbirth continue to die of that world-old disgrace, childbed fever; nearly another third die of the preventable and curable condition of uremic poisoning. Month by month and year by year half of our infant mortality continues to be birth mortality. Month by month and year by year our birth mortality plus our stillbirths continues to double our infant mortality of the first year from all other causes.

An attempt has been made to study the stillbirth returns. This has been unsatisfactory for the reason that the only cause assigned in 85 per cent of the returns is the one unqualified word, "stillborn."

One significant and interesting fact appears, and that is that almost 50 per cent of the stillbirths are the firstborn children of young couples. This startling discovery, coupled with the fact that in the hundreds of certificates examined during the past months venereal disease was assigned as a cause of fatality only once, and that a colored child, makes it apparent that a much more definite diagnosis and a more detailed report must be made if enough information is to accumulate to show a point of departure in attack upon this serious problem of waste of the life of the state at its source.

Another suggestive fact has been noted, and that is that an illegitimate stillbirth is rarely reported by physicians unless attended by some factor of publicity, and that midwives do not report stillbirths of any description. These observations lead to the conjecture that the stillbirth returns still fall short of 100 per cent.

EXPENDITURES.

The yearly budget of $7,500 was expended in 1920 as follows:

Salaries	$6,034.83
Traveling expenses	1,191.46
Miscellaneous	273.71
Total	$7,500.00

In addition to the above budget, $788.75 was subscribed by public-spirited citizens of the state for the expenses of the Children's Code Commission and Child Welfare Survey. This was expended as follows:

Salaries	$358.00
Traveling expenses	185.91
Printing and paper	59.35
Stationery	47.25
Postage	36.43
Telephone	6.20
Total	$713.14
Balance in treasury	75.61
	$788.75

The budget of the Division of Child Hygiene of Kansas remains one of the very smallest of any of the thirty-six state divisions of child hygiene, although Kansas was the second state to establish such a division.

The little state of New Jersey appropriated to its child-hygiene division in 1919-1920, $125,000 per year, and considered the money so well invested that in 1921 the appropriation was raised to $150,000 per year.

The little state of Delaware, with its three counties and 225,000 total population, appropriated in 1920, $60,000 per year for the ensuing biennial period for the use of its child-welfare commission.

The Division of Child Hygiene must have funds with which to carry on the development of its work if it is to realize for the people of the state the object for which it was created.

A lusty six-year-old child presents a ludicrous spectacle in the outgrown, outworn garments it has worn since two years old.

Constructive child-welfare work cannot be pushed very far or very fast on the price of a postage stamp per child!

This is a serious matter and really vital to the life of the state.

A FUTURE PROGRAM.

The activities of the division should take the following directions. On the present budget only a few of these can be undertaken and these only partially accomplished.

1. The correspondence course on the hygiene of child-bearing should have an additional clerk and additional stenographer, thus enabling a greater num-

ber of the 40,000 mothers bearing children each year in Kansas to receive this help.

2. A woman physician should be added to the staff of the division for the sole purpose of doing educational field work with mothers and children. The public-health nurses of the state would readily keep this person busy the year round with meeting the groups of mothers and children in their respective services. One of her special contributions would lie in the direction of organizing and standardizing local medical service for children's health conferences.

3. A nurse specialist for crippled children. There are many hundreds of crippled children in the state for whom nothing is being done. There is the greatest need for a nurse familiar with the newer methods of muscle training which have quite revolutionized the present treatment of infantile paralysis. This nurse should be placed at the services of the physicians of the state for the purpose of teaching mothers how to treat their afflicted children. Since it is usually impossible and also usually undesirable to hospitalize these children, and since treatment to be effective must be continued over a period of months and years, the only possible way to achieve this is through the training of mothers. The salvaging of one child to a status of self-support would richly repay the state in dollars and cents for this small but urgently important outlay.

4. There is great need for additional office force for the purpose of developing the use of educational literature, exhibits, charts, films, etc.; also for the purpose of compiling current statistics relative to the child life of the state. It has not been possible to keep up with the demand, much less extend these important lines of effort to the thousands of mothers and children not yet reached.

5. The support of the health car "Warren" should be increased so that it may be possible to keep it out at least nine months of the year and place on it a woman physician who can give constructive health examinations and advise with mothers and expectant mothers. This would multiply the present valuable service of the car many fold.

6. The division should own a health truck, which might be sent with the health-car staff for the remaining three months of the year through the prairies of western Kansas where families live away from the railroads and entirely out of reach of instruction or help in rearing their families to health.

7. The division should have a staff of public-health nurses to send into communities which have had no health work, for the purpose of organizing and conducting children's conferences, prenatal clinics, etc. In most states this is considered to be one of the most indispensable adjuncts to the child-hygiene work.

8. It will be absolutely necessary for the division to have a fund with which to carry out the law relating to the inspection of children's homes and maternity homes before either the letter or the spirit of the law can be realized. There is an enormously important work to be done in this connection if the dependent children of the state are to have a fair show.

There are many other possible and desirable activities, as, for instance, initiative and coöperation in the present attack on malnutrition among school children; coöperation with the Bureau of Child Research; development of coöperation with other state and federal child-welfare agencies, etc.

Enough has been presented, however, to show how extremely hampered, restricted and actually crippled the division is for meeting these overwhelming obligations.

On the 1st of July, 1921, the United States Public Health Service paid the Division of Child Hygiene the courtesy of appointing the director acting assistant surgeon, U. S. P. H. S.

The director attended the annual meeting of the American Child Hygiene Association held at St. Louis, October 12 to 20, 1921, and also sections on diseases of children and preventive medicine of the American Medical Association meeting held in Boston, June 6 to 10, 1921. These meetings were both interesting and profitable.

EDUCATIONAL MEASURES.

In all, 47,052 pieces of educational literature have been sent from the office of the division.

This has included 11,818 pieces of printed government literature, 10,934 pieces of state literature, and 24,300 pieces of mimeographed literature prepared and multigraphed in the office of the division. Among the subjects covered by this literature have been the following:

Prenatal care	547
Infant care	614
Child care	572
Milk	481
Health conferences and centers	36
Examination records	6,210
Weight tables	77
How and when to tell story	961
Child-welfare survey material	543
Children's Code Commission literature	17,810
Club-study programs	64
Speaker's bureau	4,596
Health car "Warren" literature	58
Kalikaks of Kansas	360
Miscellaneous	13,123
Total	47,052

This literature has in the main been issued only on demand. No attempt has been made to create or extend the demand, for the simple reason that the division has been taxed to the limit to meet spontaneous requests.

FILMS.

The two films owned by the division, "Our Children" and "An Equal Chance," have been in constant demand. It is highly desirable that this service be extended by the addition of other worth-while films.

CHARTS.

The health and child-welfare exhibit has been extensively used, but is in urgent need of renewal and enlargement.

CORRESPONDENCE.

In all the chief has dictated 2,656 personal letters, covering the widest possible range of subjects. This is in addition to 3,450 circular letters upon special subjects.

LECTURES AND CONFERENCES.

In general it has been the policy of the chief of the division to make an average of one trip each week and combine as many objectives as possible in order to economize both time and money. Often children were examined at a health conference, one or more public talks given and a children's home inspected in one trip.

COÖPERATION WITH PUBLIC HEALTH NURSES.

While there is no centralization of public-health nursing in Kansas, as is the case in many other states and most highly desirable in Kansas. The public-health nurses, who number approximately 100 at present, have spontaneously and individually felt the need of coöperation and assistance from the State Department of Health and have requested assistance in the way of literature, speakers, examiners, etc., far exceeding the capacity of the division to respond.

The Division of Child Hygiene has ever found the public-health nurses ready to respond to suggestion or appeal. For illustration, during the last few weeks 271 applications for the correspondence course in the hygiene of childbearing have been received through the public-health nurses.

It is most unfortunate that the public-health nursing of the state is not centralized in a state division of public-health nursing, and also that the Division of Child Hygiene is without resources for extending the coöperation which would be of untold mutual benefit.

A bill was introduced before the 1921 session of the legislature asking for the establishment of a division of public-health nursing within the State Board of Health, where it would serve and be served alike by the divisions of child hygiene, epidemiology, vital statistics and health education. Along with many other measures, this bill did not get past the committee.

FITTER FAMILIES FOR FUTURE FIRESIDES.

The first new educational project to be undertaken by the Division of Child Hygiene within the year was the "fitter families contest" held at the Topeka Free Fair, September 13 to 18, 1920. The chief of the Division of Child Hygiene directed this and was assisted by Mrs. Mary T. Watts, of Audubon, Iowa.

The project involved the eugenic examination of entire families instead of separate individuals only, as has been the custom heretofore.

A most thorough examination form was worked out by a committee of professional specialists. This form covered family history, psychological, mental and nervous examination, structural, general medical and laboratory examination, the latter covering urine, hæmoglobin, urethral smear and Wassermann for every adult. Specialists also examined eye, ear, nose, throat and teeth. An average of three hours' time was required to put one individual through the entire process. It was the endeavor to make this as thorough as it is humanly possible to make an examination of this character with present knowledge.

The contest was open to healthy families only. No treatment or medical advise was offered. It was distinctly a preventive health procedure, designed for the purpose of stimulating interest along the line of thoroughbred family stock, periodical physical examination, and also to start a nucleus of information concerning hereditary behavior in family strains, and incidentally begin in a small way to establish standards and collect statistics of normality for family groups.

It was thought necessary to offer a bait in order to arouse interest in this initial event. Therefore, Governor Allen offered a silver loving cup to the "fittest family." Senator Capper offered medals to all grade A individuals, and the State Board of Health offered A, B and C health certificates to all entrants completing the examination.

That the public is ready for positive eugenic propaganda is evidenced by the fact that more families applied for the examination than could be accommodated, and especially by the fact that in the main they seemed to come for the purpose of getting the examination rather than because of the attraction of the trophies.

The following staff of specialists carried out the examinations during the six days of the Fair. At the final conference of examiners at the close of the contest all agreed that the effort had been well worth while, and the belief was expressed that in this demonstration lies an indication of at least one of the next logical steps in positive health protection and eugenic progress.

EXAMINERS.

PSYCHOMETRIC: Prof. J. C. DeVoss, Prof. D. A. Worcester.

MENTAL AND NERVOUS: Dr. Karl A. Menninger, Dr. Maud DeLand, Mrs. Harry Lindsey.

STRUCTURAL: Dr. James Naismith, Dr. W. R. B. Robertson, Dr. Martha Bacon, Miss Leonora Fox.

PHYSICAL: Dr. T. D. Tuttle, Dr. B. K. Kilbourne, Dr. S. L. Cox, Dr. Elvenor Ernest, Dr. Caroline Juergens, Dr. Homer Collins, Dr. P. E. Bellnap, Dr. B. Belle Little, Dr. Florence McKay.

DENTAL: Dr. F. A. Koester, Dr. W. A. McCarter, Dr. F. B. Wilcox, Dr. G. F. Benson.

EYE, EAR, NOSE, THROAT: Dr. C. L. Williams, Dr. R. S. Magee, Dr. Geo. A. Allen, Dr. Geo. V. Allen, Dr. H. L. Alkire, Dr. Geo. H. Litsinger, Dr. W. J. Walker.

LABORATORY TECHNICIAN: Miss Annetta Nichol.

In all, 25 families, comprising 100 individuals, completed the examination. The following summary of the physical findings and histories was made by one of the examining physicians, Dr. Elvenor Ernest. It will bear close reading in view of the fact that not one of these individuals was sick or ailing or supposed him or herself to be definitely out of health. The expense of the project was borne by the Free Fair Association, through its secretary, Mr. Phil. Eastman. All personal service, however, was cheerfully donated. The contest is to be repeated at the Topeka Free Fair, September 12 to 17, 1921.

FAMILIES.

Families	25
Individuals	100
Mothers	25
Fathers	23
Children	52

Grade A families	3
Grade A individuals	55
Grade B individuals	41
Incomplete, no grade	4

FATHERS OF FAMILIES.

Average age	34.5
Weight normal	1
Underweight (average, 11.2 lbs. each	17
Overweight (average, 12.6 lbs. each)	5

Present occupation:	
Stock raising	1
Farmer	11
Retired farmer	1

Salesman	1
Physical director	1
Aviator	1
Lawyer	2
Mail carrier	1
Miller	1
Machinist	1
Engineer	1
Writer	1
Previous occupations too numerous to classify.	
Nativity:	
Kansas	14
Ohio	1
Indiana	1
Illinois	3
Iowa	3
Nebraska	1
Education:	
Grade school only	6
Grade school and business course	1
High school one year	1
High school two years	1
High school three years	2
High school four years	3
Business college and high school	3
College one year	3
College two years	1
Degrees: LL. B., 2; B. S., 1; Electrical Engineering, 2	5
Physical history:	
Vaccinations	17
Inoculations	7
Operations	3
Injuries	1
Previous illness:	
Chicken pox	15
Scarlet fever	3
Measles	20
Whooping cough	16
Typhoid fever	1
Malaria	3
Pneumonia	9

Bronchitis	2
Tonsilitis	6
Frequent colds	3
Pleurisy	1
Dysentery	4
Chronic constipation	2
Rheumatism	2
Venereal disease	1
Mumps	3
Appendicitis	2
Tapeworm	1
Cardiovascular defects:	
Pulse after exercise fast	1
Varicose veins	2
Heart rhythm irregular	1
General defects:	
Enlarged glands	5
Lungs rales	1
Appendix tender	2
Rectum, hemorrhoids	3
Defects of reproductive system:	
Varicocele	5
Defects of skin and endocrine:	
Neoplasms	1
Callosities	19
Eye defects:	
Vision imperfect	1
Blind in left eye	2
Astigmatism	2
Corrected	1
Ears, all normal.	
Defects of nose:	
Septum deflected	6
Turbinates diseased	1
Membrane inflamed	6
Defects of throat:	
Tonsils large	2
Diseased	4
Membrane inflamed	3
Laboratory findings:	
Urine	Negative for all.
Urethral smear	Negative for all.
Wasserman	Negative for all.

MOTHERS OF FAMILIES.

Average age	33
Underweight (nursing mothers, 9)	15
(Average underweight, 14 lbs.)	
Overweight (nursing mothers, 2)	9
(Average overweight, 15.5 lbs.)	
Normal weight (pregnant mother, 1)	1
Present occupation:	
Housewives	25
Previous occupation:	
Teachers	12
Clerks	2
Stenographers	2
Y. W. C. A. secretary	1
Telephone operator	1
Graduate nurse	1

Mechanical draftsman	1
At home, not employed	5
Nativity:	
Kansas	14
Iowa	1
Nebraska	1
Massachusetts	1
Illinois	1
Missouri	3
Pennsylvania	1
Washington	1
Ohio	1
New York	1
Education:	
Grade school only	3

Grade school with music	1
Business course	2
High school one year	2
High school two years	6
High school four years	11
College one year	1
College two years	2
College four years, A. B. degree	3
Graduate nurse, three-year course	1
Normal school	2
High school one year, with business,	1
Physical history:	
Vaccinations	19
Inoculations (typhoid, 1; influenza, 1)	2
Operations (tonsils, 2; app., 3; perin, 2; systic ovary, 2)	8
Injuries (all minor)	4
Previous illness:	
Chicken pox	15
Scarlet fever	3
Diphtheria	3
Measles	18
Whooping cough	17
Typhoid fever	4
Malaria	2
Tuberculosis (left lung, healed)	1
Pneumonia	5
Bronchitis	4
Tonsilitis	9
Frequent colds	4
Asthma	2
Pleurisy	4
Dyspepsia	2
Dysentery	1
Chronic constipation	3
Liver	2
Gall bladder	1
Rheumatism	3
Goitre	1
Influenza	7
Cardiovascular defects:	
Low diastolic pressure	4
Palpable blood vessels	4
Varicose veins	5
General defects:	
Enlarged glands	2
Lungs, healed lesions	1
Kidney movable, R.	1
Hernia (L. inguin.)	1
Rectum, hemorrhoids	7
Defects of reproductive system:	
Perineal tear	9
Not repaired	7
Ovaries enlarged	1
Uterus subinv.	1
Retrofl	1
Lac. cervix	3
Cervicitis	2
Stillborn babies	3
Defects of skin and endocrine:	
Callosities	12
Eye defects:	
Vision imperfect	3
Astigmatism (corrected, 2)	8
Conjunctivæ infl.	2
Ears, all normal.	
Nose defects:	
Septum deflected	4
Turbinates diseased	1
Polypi	2
Membrane diseased	1
Throat defects:	
Tonsils large	6
Diseased	9
Laboratory findings:	
Urine, all negative, except one albumin.	
Urethral smear, all negative, except one nonspecific inflammation.	

CHILDREN IN FAMILIES.

CHILDREN 6 TO 18, INCLUSIVE.

Boys.

Number	11
Average age	9.7
Underweight	9
Overweight	1
Normal weight	1
Occupation—all in school:	
Grade 1	2
Grade 2	1
Grade 3	2
Grade 4	2
Grade 7, 8, 9, each one	3
High school (first year)	1
Nativity:	
Kansas	10
Indiana	1

Girls.

Number	6
Average age	11
Overweight	2
Underweight	2
Normal weight	2
Occupation—all in school:	
Grade 2	2
Grades 5, 8, 9, each one	3
High school (third year)	1

CHILDREN, ADULTS, IN FAMILIES.

Male.

Number	1
Age	22
Overweight (lbs)	2
Occupation	Merchant.

Nativity	Kansas.
Education	College 2½ years.

Female.

Number	4
Average age	22.5
Underweight	4
Occupation:	
Housewives	2
Teacher	1
Student	1
Education:	
High school (plus business, 1)	4
College, two years	1
College, four years (A. B. degree, 1),	2
Nativity:	
Kansas	3
Nebraska	1

CHILDREN 6 TO 18, INCLUSIVE.

	Boys.	*Girls.*	*Male adults.*	*Female adults.*
Physical history:				
Operations	4	4	1	2
Tonsils	3	3	1	2
Adenoids	1	3	1	1
Vaccinations	5	1	1	3
Inoc. typhoid	1	1	1	1
Smallpox	4	1	0	1
Influenza	2	0	0	0
Chicken pox	5	2	1	2
Measles	9	5	1	4
Whooping cough	8	6	1	4
Pneumonia	2	2	0	0
Bronchitis	1	1	0	0
Tonsilitis	6	2	1	0
Frequent colds	4	1	0	1
Chronic constipation	1	0	1	1
Nephritis	1	0	0	0
Influenza	3	1	0	0
Gathering in head	0	1	0	0
Rheumatism	0	1	0	0
Scarlet fever	0	1	1	3
Diphtheria	0	1	0	0
Goiter	0	0	0	0
Cardiovascular defects:				
Rapid heart	1	1	0	3
Rhythm irregular	2	0	0	0
Bl. p. syst. (high)	0	0	0	1
General defects—enlarged glands:				
Cerv	1	0	1	0
Submax	1	0	0	0
Inguin	3	0	1	0
Defects of reproduction:				
Phimosis	4	0	0	0
Hooded clit.	0	1	0	0
Lacerated cerv.	0	0	0	1
Retrofl. uterus	0	0	0	1
Defects of skin and endocrine:				
Callosities	2	0	1	2
Eye defects:				
Vision imperfect	1	0	0	1
Astigmatism	3	0	1	2
Conjunctivitis	0	1	0	0
Ear defects:				
Hearing defective	1	1	0	0
Wax	0	2	0	0
Nose defects:				
Septum deflected	3	0	1	0
Turbinates inflamed	0	1	0	0
Throat defects:				
Tonsils enlarged	3	0	0	3
Membrane inflamed	0	2	0	0

CHILDREN UNDER 6 YEARS.

Boys	18
Girls	11
Average age (years)	2½
Nativity—boys:	
Kansas	17
Iowa	1
Nativity—girls:	
Kansas	8
Missouri	3
Physical history:	
Breast fed	27
Birth known to be registered	26
Uncertain	3
Vaccinated	8
Inoculated:	
Pertussis	3
Typhoid	1
Previous illness:	
Measles	4
Whooping cough	10
Chicken pox	3
Croup	1
Frequent colds	11
Tonsilitis	1
Influenza	4
Pneumonia	2
Colic	2
Constipation	4
Diarrhœa	3
Convulsions	2
Enuresis	2
Weight:	
Over (average, 2.06 lbs.)	6
Under (average, 2.97 lbs.)	10
Average, boys	2
Over (average .62 lbs.)	2
Under (average, 1.3 lbs.)	7

Average weight	2
Height:	
Over (average, 1.18 in.)	9
Under (average, .4 in.)	2
Average, boys	7
Over (average .4 in.)	3
Under (average 1.6 in.)	4
Average height	4
Mental development:	
Normal	26
Above (female)	1
Below (male)	2
Teeth:	
Normal development	19
Deficient or defective	10
Eyes, ears, noses, normal in all.	
Throat:	
Adenoids	3
Large or bad tonsils	2
Nutrition:	
Poor	7
Average	22
Skin and scalp:	
Dermatitis	6
Insect bites	5
Birthmarks	1
Dirty scalps	2
Thumb sucker	1
Physical defects:	
Winged scapulæ	6
Bulging foreheads	3
Prominent abdomen	4
Depressed sternum	3
Costal beading	1
Phimosis	6
Circumcised	5

INSPECTION OF MATERNITY HOMES AND CHILDREN'S HOMES.

Again the state legislature turned a deaf ear to the reasonable request that a fund be appropriated for the administration of the law of 1919 which requires the Division of Child Hygiene to inspect and report upon the condition of specified classes of maternity homes and children's homes. Since thirty-four incorporated children's homes, twenty-five and more private boarding homes and three maternity homes are upon the inspection list, this manifestly involves a considerable expense which the division has had no way to meet.

The chief has taken advantage of every accidental proximity to these homes and has taken advantage of every opportunity to delegate althority to make inspections to other state officials and responsible individuals.

The staff of the health car "Warren," the woman lecturer of the Division of Venereal Disease, the home demonstration supervisor of Kansas State Agricultural College, the teaching staff of the home economics department at Kansas University, and in some instances public-health nurses, have all rendered invaluable and generous assistance and have all given cheerfully of personal time because of interest in the dependent children of the state.

Even with this volunteer aid it has been impossible to push the standardization of this work, and it is to be especially regretted that the resources of the division have not admitted of active assistance to these worthy and struggling institutions. The monthly reports have been made most consientiously by most of the institutions.

The following tabulations have been made from such data as has been submitted in the reports by Miss Elizabeth Edson, secretary to the chief of the Division of Child Hygiene:

GENERAL STATISTICS.

Number children in residence January 1, 1920	694
Number admitted January 1 to July 1, 1920	266
Total	960
Number discharged January 1 to July 1, 1920	318
Number remaining July 1, 1920	642
Number admitted July 1, 1920, to July 1, 1921	505
Total	1,147
Number discharged July 1, 1920, to July 1, 1921	459
Number remaining July 1, 1921	688
White	1,254
Black	211
Males	765
Females	700

Nationality of parents:	
American	1,143
German	43
Irish	38
Jews	4
Swede	18
Austrian	5
Russian	17
French	17
English	8
Italian	6
Mexican	5
Nationality unknown	161
Religion of parents:	
Church of God	13
Baptist	42
Christian	41
United Brethren	3
Methodist	57
Lutheran	33
Catholic	223
Mennonite	11
Presbyterian	5
Mormon	1
No religion	100
Religion unknown	936
Father living	913
Father dead	290
Unknown whether living or dead	262

Occupation of father:	
Laborer	381
Shoe cobbler	3
Miner	18
Student	3
Farmer	80
Railroad brakeman	11
Mechanic	25
Carpenter	23
Cook	17
Merchant	7
Clerk	12
Blacksmith	1
Salesman	14
Teacher	2
Soldier	11
Porter	6
Chauffeur	1
Tailor	3
Printer	2
Barber	11
Undertaker	2
Conductor	3
Peddler	2
Policeman	1
Occupation unknown	826
Mother living	832
Mother dead	443
Not known whether living or dead	190
Occupation of mother:	
Waitress	63

Housewife	247
Clerk	18
Nurse	10
Laundress	24
In factory	30
Dressmaker	11
Actress	1
Musician	3
Stenographer	3
Chiropractor	2
Teacher	4
Telephone operator	1
Occupation unknown	1,048
Parents separated	187
Mother deserted	117
Parents divorced	137
Mother not married	49
Reason for admission:	
No home	873
Mother works	218
Mother in hospital	60
Father in penitentiary	6
To receive education	22
Delinquent	1
Cruelty of father	3
Poverty	93
For medical treatment	22
Reason unknown	167
Children legally relinquished	83
Committed by court	243
Boarded	783
Pecuniary condition unknown	356
Report to nearest friend or relative	988
No report	477
Final disposition:	
Returned to relative or guardian	511
Adopted	44
Indentured	108
Taken without indenture	47
Reached majority and discharged	3
Employed	8
Escaped	2
Died	22
Boarded out	1
Sent to Boys' Industrial School	2
Disposition not known	29

TABULATION OF EXAMINATIONS.

Number of children examined	313
10 per cent and over overweight (8 per cent)	26
10 per cent and over underweight (16 per cent)	51
Mental condition:	
Bright	213
Industrious	147
Dull	27
Inattentive	58
Nervous	43
High strung	15
Difficult to govern	12
Failed in grades (8 per cent)	27
Subnormal (3 per cent)	10
General physical condition:	
Well developed	265
Energetic	129
Poorly developed	35
Listless and inactive	15
Bodily structure:	
Stands straight	205
Shoulders round	41
Scapulæ prominent	37
One hip and shoulder high	20
Chest narrow	22
Bow-legged	15
Pigeon-toed	5
Long arch flat	12
Anterior arch flat	8
Scalp:	
Healthy	259
Clean	271
Dirty	7
Pediculi	1
Diseased	1
Nails:	
Clubbed	3
Bites nails	12
Skin:	
Clear	267
Sallow	36
Pale	5
Flabby	7
Eruption	50
Eyes:	
Defective vision (14 per cent)	46
Cross-eyed	9
Wears glasses	8
Inflammation	37
Other defects	3
Mouth, nose, throat and teeth:	
Teeth irregular	41
Teeth prominent	20
Mouth breathing	31
Coated tongue	27
Adenoids present	27
Adenoids removed	37
Enlarged tonsils	97
Diseased tonsils	26
Tonsils removed	56
Neck: Enlarged glands	46
Genitals:	
Has been circumcised	15
Phimosis present	12
Other defects	1
Headache:	
Never	59
Seldom	39
Often	2

Indigestion:	
Never	45
Seldom	51
Often	6
Constipation:	
Never	42
Seldom	43
Often	11
Fatigue:	
Easily out of breath	2
Gets tired easily	3
Condition of mouth:	
Good	195
Fair	59
Bad	7
Condition of gums:	
Pale	13
Good color	238
Diseased	17
Abscesses	28
Condition of teeth:	
Stained	108
Tartar	64
Number of cavities in teeth:	
Permanent	228
Temporary	240
Number of permanent teeth missing	62
Malocclusion:	
Marked	3
Moderate	36
None	84
Number of teeth filled:	
Temporary	25
Permanent	22

FREE DENTAL INSPECTION.

The session of 1919 of the Kansas legislature passed a bill requiring all boards of education of cities of the first and second class and school boards of school districts to employ one or more dentists for the purpose of inspecting the teeth of all children in the public schools.

There is no enforcement or penalty clause, and no provision is made in the bill for standardizing the method for collecting or tabulating results.

The State Board of Health became aware of the situation when numberless inquiries came to its offices asking what blanks were to be used, where they might be secured, etc.

The secretary of the State Board of Health called the executive council of the State Dental Association into conference, with the result that record forms were drafted covering dental conditions and certain physical conditions which may reflect more or less directly the effect of dental defects. Instructions were drafted, in joint council, to dentists, teachers and school boards. It was requested that duplicate records be sent to the Division of Child Hygiene for statistical purposes.

At the close of the school year of 1920, inspections of 15,869 children had been returned to this office. The staff of the Division of Child Hygiene, with some assistance as it could be spared from other divisions, worked on the tabulations of the report from this unit. As this remained unfinished at the end of the year, and the appropriation of the division did not admit of the employment of additional help, the case was laid before the State Dental Association, which promptly authorized the employment of additional clerks to complete the tabulations and also to tabulate the returns of the years 1921 and the first six months of 1922. The results of the tabulations for 1920 are hereby given:

RESULTS OF KANSAS FREE DENTAL INSPECTION.

A total of 15,869 children, in 9 counties: Barton, Franklin, Geary, Marshall, Montgomery, Reno, Riley, Jackson and Sedgwick.

Physical inspections made by teachers, who report:

Dull	1,476
Inattentive	1,599
Nervous	1,267
High strung	430
Difficult to govern	344
Failed in grades	1,026
Absent often	587
Poorly developed	1,260

Listless, inactive	660
Sallow	1,051
Pale	667
Pimples	888
Defective vision	1,418
Irregular teeth	1,337
Prominent teeth	295
Mouth breathers	892
Nasal voice	379
Nasal discharge	287
Coated tongue	938
Enlarged glands	799

Pain in joints or muscles	334
Headache occasionally	3,359
Headache often	1,085
Headache worse in morning	549
Headache worse in afternoon	1,512
Toothache occasionally	2,292
Toothache often	476
Indigestion occasionally	1,760
Indigestion often	323
Easily out of breath	900
Tires easily	861

Dental inspection made by dentists, who report:

Condition of mouth:	
Good	5,203
Fair	3,211
Bad	418
Condition of gums:	
Good	6,778
Fair	1,715
Bad	153
Abcesses	935
Number cavities in permanent teeth	10,994
Number cavities in temporary teeth	12,118

Stain	6,054
Marked malocclusion	471
Moderate malocclusion	1,749
Use toothbrush regularly	3,151
Use toothbrush occasionally	4,960
Use toothbrush never	1,216
Other dental defects	83
Referred to dentist	3,205
Dental defects corrected at once (before report was turned in)	694

THE KANSAS CHILDREN'S CODE COMMISSION.

The chief of the Division of Child Hygiene acted as secretary to the Children's Code Commission which was appointed by Governor Allen in 1920. There was no appropriation and no fund other than the money subscribed by volunteer contribution (see p. 222). A very creditable program was prepared by the drafting committees, but it was not ready in time for effective presentation to the session of 1921. It was thought best to present the entire program in order to emphasize the idea that legislation on a given subject must be organic and comprehensive.

The legislation of Kansas relative to children, like that of many other states which have not adopted codes, represents the legislative action of many assemblies, much of it in the nature of patchwork upon other statutes, and all of it without unity of purpose or close correlation. Some of it is obsolete, as in the instance of the old apprenticeship laws of 1868, which still stand unrepealed upon the statutes. Some of it is conflicting, as in the instance of the present child-labor and compulsory school-attendance laws. All of it is scattered and unstandardized, and should be revised, made organic and brought up to uniform, modern, child-welfare standards.

Children's codes are more than the bringing together or codifying of the children's laws of the state. Children's codes represent an effort to standardize and express the legal rights of childhood in a consistent, unified way.

The first effort in this direction was called a "Children's Charter," and the name has still much to commend it.

The formulation of a code or charter has become much easier since the adoption of minimum standards in child welfare by the International Conference on Child Welfare, which met in Washington in 1919. The resolutions passed at this conference have been printed in pamphlet form by the Federal Children's Bureau, and may be obtained by anyone for the asking. The original resolutions have been modified and tested by all kinds of social groups until it may safely be said that these standards represent the consensus of opinion of the civilized world.

In a word, the Kansas children's code represents an effort to write the international child-welfare standards into the laws and the life of Kansas.

This is why a program was presented which covers the entire field of children's interests. Every children's law depends upon and dovetails with many other laws, and it is only by making an architect's plan and building to it that a consistent, legally competent structure can be achieved in the end.

THE CHILDREN'S CODE COMMISSION MOVEMENT.

The first state code commission was appointed in Ohio by act of the legislature in 1911, and instructed to suggest "such amendments and additions to the laws as seemed best calculated to bring the laws of the state into harmony with the best thought on this subject." After two years' work this commission brought in a report in the form of one enormous, comprehensive bill, covering juvenile courts, children's institutions, placing out, compulsory education, child labor, apprenticeship, offenses against children, and mothers' pensions. With some modification, this report was adopted as presented. New Hampshire followed in 1913; Missouri and Minnesota in 1916. The commission of Missouri presented in all sixty bills to three successive sessions of the legislature, fifty of which have been written into the statutes. The Minnesota code commission presented forty-three bills to the session of 1917, thirty-six of which were passed "with scarcely a dissenting vote" by the same session.

Since this time more than half the states have commissions appointed either by legislative act or by the governor.

The Kansas Children's Code Commission was appointed in 1919 and presented a program of six bills, three of which were written into the statutes. These were:

1. An act to license maternity hospitals or homes, and homes for infants or children, and making violation thereof a misdemeanor, and providing penalties therefor.
2. An act changing the name of the State Home for Feeble-minded at Winfield to State Training School.
3. An act relating to feeble-minded persons; appointment of commission to make examination; duties of probate judge; commitment to Home for Feeble-minded.

In 1920 Governor Allen appointed a commission of twenty-one active and eighty advisory members, which presented a program of twenty-one bills to the session of 1921. Three of these bills passed:

1. An act to establish a bureau of child research at the University of Kansas. This bill, however, was passed with no appropriation. A start has been made in spite of this handicap.
2. An act to amend the mothers' pension act, making mothers' pensions mandatory, and raising the maximum amount which could be granted by the county commissioners from $25 a month to $50.
3. An act making mandatory the establishment of kindergartens in public schools in cities of the first class, over 18,500.

While few bills were passed the Commission ventures to hope that sod has been turned and seed sown which will bear fruitage at another session.

THE CHILD WELFARE SURVEY.

The Child Welfare Survey as outlined in the annual report of 1920 was carried on in a number of additional cities and counties and the results were of much value to the members of the Children's Code Commission, besides arousing and unifying local interest and leading in every instance to constructive follow-up work.

It is unfortunate that money and personnel were lacking to complete a really state-wide survey.

REPORT OF THE HEALTH CAR, 1920-1921.

By Edna L. Burch.

A thousand miles of children, ten thousand miles of mothers and fathers, a hundred thousand miles of friends, and a million miles of appreciation! And this is not so much of an exaggeration, for the itinerary of the health car this year covered more than 1,000 miles—Topeka to Baxter Springs and return (Santa Fe and Frisco); Topeka to Sharon Springs and return via the Colby-Salina branch of the Union Pacific. And wherever the car goes it has its hosts of grateful friends, for it carries to all communities and individuals free information and advice on the subject, which, after all, is of more real and vital importance to them than anything else—*health.* From the youngest youngster to the grayest grandfather, they are all interested in "how to stay well." Sometimes men and women, even boys and girls, in their busy lives forget how much they owe to themselves and they treat the finest of machines, their bodies, worse than the farmer treats his Ford. But when they come in the health car they are face to face and ear to ear with the plain, everyday truths about health, and they pause to consider and to learn.

"A state that spends twenty cents per capita for live stock and agricultural purposes, and two cents per capita for public health, is apt to produce ten times as fine animals as people, is it not?" I ask the average group on the car. Always the reply is, "That's right." And the next question on my part is, "Is it economy or false economy to economize by decreasing our health appropriation from two cents to one and one-fourth cents?" I have yet to find anyone who says this is good economy. And many, many times some one says, "If the legislature would interest itself in more important things and less unimportant things we'd all be better off."

All ages, all classes, all colors—and all welcome. At one end of the car is the motto, "Health, strength, joy, for all the children of all the people," and at the other end is the quotation, "Where there is no vision the people perish." So if we can teach the children and their parents how they may secure health, strength and joy for all the children, and to the others if we can but give a vision of the things they may do to keep the most priceless of gifts or possessions—health—it is indeed a great service and one that is worthy of the most loyal and ample support.

Between a half and two-thirds of our visitors are children, and they are, perhaps, the most receptive and the most teachable. They are "crazy" about the car, and every day we hear or see the results of our work with them. The thousands of letters we receive from them is a very tangible example of what they learn.

It is most interesting to see what subjects people show the most interest in. From my own observations I would list them in the following order:

1. Diet—What to eat, what to feed the children.
    Special diets:
        Diet for the thin.
        Diet for the fleshy.
        Diet for rheumatics.
        Diet for high blood pressure.
        Diet for diabetics.
        Diet for aged.
2. Sanitation.
3. Tuberculosis.
4. Communicable diseases.
5. Shoes for women.

Advance publicity has been handled for us from the office, as usual, but as soon as we arrived in town we got in touch with the mayor, the superintendent of schools, the newspapers, and sometimes the ministers, the picture shows—and once, in Hill City, we found a man who painted signs on store windows and on the sidewalks. One of the most effective ways of reaching the rural people was to ask the rural phone operator to give a "line ring" and then tell them about the car.

Many of the towns we visited on the spring trip had no paper, schools were out, and people were busy harvesting, so it is not surprising that our crowds were smaller than usual.

As much personal or individual work was done in the car as the size of the group would permit. But there were many times when the two of us did well to make ourselves seen or heard. Many days we averaged 600 to 800 people, and the car was full from 9 a.m. to 9 p.m., and there were times when we had to ask people to go so we could close the car at 11 p.m. One or two nights at each stop we kept the car open until 9 or 9:30, and often we had our largest crowds then.

Literature on various subjects was given to practically every mother or father and to many other individuals as well. At the end of two months this spring we had given away practically all the literature we had, and could get no more except that on sex hygiene.

Whenever we could not answer a question asked us we tried to refer them to some one who could, and whenever any state department or division could help in solving anyone's problems we advised communication with that office or individual.

What a lot of people it does take to make a state! What a lot of troubles of all kinds they do have! And how few of them know any way to help themselves! But they can assimilate food thoughts that have been predigested for them, and to many the health car brings food in that condition. To others it is just an appetizer.

Seeing a large crowd coming and going from the car one day, a man came in and said, "I thought this was a place to eat." "We don't serve food, but we feed the hungry," we replied, "for we do attempt to appease, at least, the hunger of people for knowledge along the line of *how to keep well.*" And they are hungry to know. And what greater service could a state render to its people than such education?

No opportunity has been lost to urge upon voters the need for educating their legislators, and the response has indicated that people are beginning to feel this themselves.

And now what does all this service cost, and how many citizens does it reach?

FALL TRIP.

Estimated total number visitors	20,300
Number of days out	79
Average daily attendance	256
Total expenses	$1,700.67
Average daily expenses	$21.51

SPRING TRIP.

Estimated total number visitors	30,890
Number of days out	96
Average daily attendance	321
Total expenses	$1,899.82
Average daily expenses	$19.78

SUMMARY.

Total number of days out	175
Total number of visitors	61,210
Average daily attendance	349
Total cost	$3,600.49
Average cost per day	$20.65
Cost per person in attendance	$0.0588

Six cents! You can't even buy a package of flower seeds any cheaper. Surely the seeds of good living thus sown over the state will bring forth the finest flowers a state can sow.

Report of the Director, 1922.

To Dr. S. J. Crumbine, Secretary of the State Board of Health:

DEAR SIR—I have the honor to herewith submit the report for the Division of Child Hygiene for the year ending June 30, 1922.

Dr. Florence Brown Sherbon resigned from the division, her resignation taking effect September 1, 1921. Miss Elizabeth Edson and Mrs. Lindsay constituted the entire personnel of the division until the new chief arrived, January 1, 1922. During this time the correspondence course on the hygiene of childbearing was kept up and the usual demands for literature from the department were supplied.

During the summer months Doctor Sherbon made inspections of maternity and children's homes, held a number of health conferences, continued the tabulation of statistics on maternal deaths and stillbirths, and assisted in the conduct of the second annual "fitter families contest."

The passage of the Sheppard-Towner act places at the disposal of the Division of Child Hygiene the sum of $5,000, and an additional amount when matched by our state. This additional sum calls for an appropriation of $16,932.52 from the state legislature. This will permit the extension of the plans of the Division of Child Hygiene along certain long-desired lines. The following program was submitted to the Board of Maternity and Infant Hygiene, Children's Bureau, Department of Labor, on March 22, 1922:

FIRST—*Education.* This consists in:

(*a*) The distribution of our printed literature and letters relating to various phases of prenatal instruction, including the proper hygiene of maternity and the care of the baby and child up to school age, but more particularly the first two years.

(*b*) Public addresses to various types and groups of people, particularly to mothers and expectant mothers.

(*c*) The use of movie picture films and stereopticon slides through a loan library to public-health workers and nurses, or used direct by the members of the staff.

(*d*) The use of exhibits, posters, etc.

SECOND—*The Public Health Car "Warren"*—through which means we endeavor to accomplish the following:

(*a*) Meet the people, particularly the mothers of the community to which the car goes, in order that we may discuss with them, in a personal manner, their problems relating to maternity and infancy.

(*b*) Afford opportunity to the entire community to see the exhibit in the car and hear the lectures by the accompanying staff.

(*c*) Coöperation with the school authorities, through which means the entire school has an opportunity to visit the car, by classes, after which every pupil is required to write an essay on the meaning and value of the things he saw and heard on the health car. This might be called our "rubbing-in" process.

(*d*) Hold mother's conferences and children's clinics, and if possible to organize some permanent sort of an organization, under local or community supervision, through which means clinics, conferences and lectures may be featured at stated periods.

THIRD—*Study of Maternal and Infant Mortality:*

(*a*) Already a start has been made in a study of the cause of 1,200 stillbirths occurring in Kansas last year.

(*b*) In the city of Topeka and Shawnee county, which is the department's headquarters, an intensive study will be made of the cause of all infant and maternal deaths, and the cause of all stillbirths occurring in the area in 1922. This study will be in coöperation, if possible, with the attending physician, securing blood samples of the mother in the case of a stillbirth for Wassermann tests, and such other means as seem to be necessary to make a complete and intensive study of these matters for the unit including the city of Topeka, with a population of approximately 55,000, and of Shawnee county, the rural community immediately surrounding the city, with a rural population of 12,000.

FOURTH—*Miscellaneous:*

(*a*) It is designed to make an intensive campaign for the purpose of increasing birth registration. This work will be carried on by the division of vital statistics and the division of child hygiene working in coöperation, special emphasis being placed upon the availability of field public-health nurses in the work of birth registration.

Counties and municipalities in the state that do not show what is considered a normal birth registration will be carefully checked by a representative of the division of vital statistics.

(*b*) A very careful grading and inspection of children's homes and maternity hospitals has been made, and will continue to be made under the provision of a state law which provides that such inspection shall be made by the Division of Child Hygiene of the State Board of Health, and licenses are issued only when certain minimum requirements are met.

(*c*) Continuation of the policy of providing one per cent solution of silver nitrate to the midwives and physicians of the state, with, we trust, increasing efficiency in the prevention of ophthalmia neonatorum.

(*d*) We plan to secure a prominent pediatrician to address the various societies, to the end that the medical profession may be advised of the latest word in the feeding of infants and infant care in general.

The above, as enumerated, constitute our different activities, which will simply be enlarged and intensified.

ADDITIONAL PERSONNEL.

We contemplate enlarging and intensifying the work by adding at least four district public-health nurses trained in maternal and infant hygiene, who will organize the work of the state by utilizing and training the county and municipal public-health nurses already in the field, there being 130-odd public-health nurses working in Kansas at the present time; all of this work to be done under the supervision of our state supervising nurse. This will add, together with a clerk for our state supervising nurse, a personnel of six to our present force.

Arrangements will be made, and in fact have already been made in part, to work closely in coöperation with local municipal public-health associations and with the State Tuberculosis Association, in so far as their work applies to infancy hygiene, including the formation of little mothers' leagues.

INFANT MORTALITY STATISTICS.

The vital statistics for the years 1917-1921, inclusive, show the following for the state of Kansas:

	1917.	*1918.*	*1919.*	*1920.*	*1921.*
Births	38,611	39,696	37,145	40,446	42,493
Stillbirths	1,203	1,378	1,254	1,243	1,386
Deaths under one year	3,005	3,118	2,546	2,896	2,623
Deaths after birth under one year	1,486	1,567	1,235	1,427	1,121
Deaths at birth or from causes operative at birth	1,519	1,551	1,311	1,469	1,502
Birth mortality (per cent)	50.5	49	51	50.75	57
Stillbirths plus birth mortality	2,722	2,929	2,565	2,712	2,888
Infant mortality rate per 1,000 live births	68.5	77	67	71	61.6
Maternal deaths	259	307	248	253	262

The infant mortality rate dropped from 71 in 1920 to 61.6 in 1921, and compares very favorably with the infant mortality rate of the birth registration area of the United States, which was 86 in 1920.

While there were fewer deaths in the state under one year of age in 1921 than there were in 1920, there were more deaths at birth or from causes operative at birth. In other words, the per cent of birth mortality is higher in 1921 than at any time during the five-year period, and the marked decrease in infant mortality rate has been largely in that group which has survived the first few weeks of life.

This fact when compared with the stillbirths and maternal death rate, which have increased slightly during the year 1921 in proportion to the increase in the number of births, all emphasize the need of better prenatal care and better care during childbirth.

A study of vital statistics of the birth registration area of the United States shows there is a marked excess of births over deaths in every state in the birth registration area.

Wherever deaths outnumber births, as happens in a few cities, the excess is usually among colored people. While the infant death rate in the registration area was 86 per 1,000 births, the death rate among those infants whose mothers were born in Denmark, Norway or Sweden was only 66. The death rate of those infants whose mothers were born in Poland was 122. The death rate among the negroes was the highest of all, being 135.

In the state of Kansas, with an infant mortality of 73 in 1920, according to the records of the registration area, the white population had a rate of 71; the Negro population a rate of 166. In fact, the death rate exceeds the birth rate among the colored people in Kansas, and the stillbirth rate is almost twice as high as the stillbirth rate for the state.

The infant mortality rate is much higher among males than females. For every 1,000 females there were 1,056 males born in the registration area in the period 1915-1920, and for every 1,000 females who died under one year there were 1,310 deaths among males under one year. The higher rate is shown in our state by the following figures:

	Under one day.	*Under one month.*	*Under one year.*
Total	16.7	40	73
Male	18.9	45	81
Female	14.3	34.5	64.5

On an average, the male weighs more at birth and has a larger head. This might account for a part of the mortality the first month of life, but cannot possibly explain the apparent greater susceptibility of the male infant to disease of the digestive system.

THE PUBLIC HEALTH CAR "WARREN."

The public health car "Warren" started west on the Santa Fe railroad March 19, 1922, with a personnel of three, and Miss Mary Haight, a graduate nurse in charge. The car went as far as Elkhart before starting on the return trip. When the car arrived in Topeka, July 8, it had visited 40 towns en route. Approximately 15,000 people have seen the car exhibits to date. In 22 towns practically every school child visited the car.

The chief has met the health car as frequently as possible for the purpose of holding mother's conferences. It was the first time the car had ever been sent over the Elkhart branch of the Santa Fe. While the car was in this part of the state the chief and one of our district nurses spent two weeks with it; lectures were given for mothers in a church or school building, health films were shown in the theaters, and conferences for babies and children of the preschool age were held on the car. These conferences were so well attended that it was necessary to procure chairs and place them on the outside of the car for the mothers with their babies while they were waiting for an examination.

EDUCATION.

LITERATURE.

The correspondence course in the hygiene of childbearing was rewritten last year by Doctor Sherbon, and now consists of twelve lessons. One lesson is sent out each week until the entire course is received.

The appreciation of this course by the mothers of Kansas may be estimated by the number of requests received—a total of 2,000 during the past year. An announcement in one of our popular farm journals always brings a flood of inquiries. Due to the publicity given the lessons by the public-health nurses and appreciative mothers there is a constant demand for this course.

The Kansas Mother's Manual was not in print until January of this year. During the five months since then, although the public-health nurses and all others interested in their distribution have been reminded that the mother's book is valuable and not to be given away indiscriminately, 11,500 copies have been distributed.

In addition to our own literature, large amounts of federal literature and some published by the Metropolitan Life Insurance Company have been distributed, as will be shown by the following statement of literature distributed from June 30, 1921, to June 30, 1922:

Correspondence course in hygiene of childbearing	2,000
Kansas Mother's Manual	11,500
Kallikaks	400
Examination blanks	5,650
Prenatal Care	500
Infant Care	600
Child Care	575
How and When to Tell the Story of Life	1,200
Safe Milk	1,050
Summer Care of Infants	500
Use More Milk	3,000
Miscellaneous	25,000
How to Conduct a Health Conference	150
Food for Young Children	1,500
Diet lists	750
Total	54,375

FILMS, POSTERS, ETC.

The films "An Equal Chance" and "Our Children" have been in active use during the year, and a new film, "Sir Lacteus," issued by the Department of Agriculture, Washington, D. C., has recently been purchased. It is a fairy tale which makes a tremendous appeal to children and stresses the value of milk as food.

New posters have been purchased and are kept constantly in use by the public-health nurses throughout the state.

Lantern slides which have been in the division a number of years, but which carry a health message that is just as true to-day, are being shown on the health car.

CONFERENCES.

Most of the public-health nurses have held, or are planning to hold, health conferences this summer. In one county baby conferences have been held in eight towns throughout the county. Another county nurse is planning to hold child health conferences in fourteen towns in her county, and still another nurse writes that she had to turn fifteen mothers away from one of her child conferences because it was so well attended she could not take care of all of them.

The local physicians make the physical examinations at most of the health conferences. The chief has assisted with a number of these conferences, and the state supervisor of nurses and her district nurses often assist the local nurse in preparing for these conferences; or, where there is no nurse and a health conference is desired, make the necessary preparations for the local physicians.

INSPECTION OF MATERNITY AND CHILDREN'S HOMES.

Fifty maternity and infant homes have been inspected since January 1. The following homes were licensed during the year:

Colored Crittenton Home, Topeka.
Bethel Neighborhood Center Day Nursery, Kansas City.
Pioneer Maternity Home, Kansas City.
Mrs. W. S. Price, Maternity Home, Lawrence.
Mother Lee Maternity Home, Wichita.

The following homes under the supervision of the Christian Service League have been licensed during the year:

Mrs. Rosa Winters.
Mrs. Grace Waldron.
Mrs. O. P. Mason.
Mrs. C. A. Graham.
Mrs. Kate Young.
Mrs. Stella Behrens.
Mrs. Lottie M. Cassman.
Mrs. J. W. Bondurant.
Mrs. Lillian Dudley.

It has been recommended that no license be issued to the Kansas Protective Home, a home for colored children, in Leavenworth, and the Mamie Jackson Day Nursery for Colored Children, in Wichita, as both homes fall far short of the minimum standards for children's homes.

Reports are now requested quarterly from all homes. This quarterly report includes all admission and discharge records, sickness reports, weight cards, and a sample menu. The tabulation sheets contain a physical and dental inspection record of every child in the home and are required once a year from each home.

FINANCIAL STATEMENT.

July 1, 1921, to July 1, 1922.

Appropriation for the division		$7,500.00
Expenditures:		
Salaries of chief, secretary and stenographer	$3,569.37	
Salaries of special help, office, lecturers	334.50	
		$3,903.87
Expenses of chief	$419.57	
Expenses of special lecturers	56.90	
Miss Cron	160.74	
Miss Dark	95.39	
Miss Nella Woods	41.86	
		774.46
Health car "Warren":		
Salary of nurses on car	$1,162.75	
Expenses of nurses on car	324.02	
Track rental	77.32	
Tickets and transportation	663.60	
Repairs and wiring	19.72	
Miscellaneous expenses and supplies	135.69	
		2,383.09
Miscellaneous expenses	222.98	
Postage	100.00	
Films	116.74	
		439.72
Total expenditures		$7,501.14

SHEPPARD-TOWNER FUNDS, 1922.

Amount received April 1, 1922		$8,991.51
Expenditures:		
Salary of Miss Dark	$150.00	
Salary of Miss Wood	130.00	
		$280.00
Expenses of Miss Dark	$56.69	
Expenses of Miss Wood	25.37	
		82.06
Total expenditures		$362.06

Respectfully submitted, HELEN A. MOORE, M.D.

PUBLIC HEALTH LABORATORY.

Report for 1921.

Following is a report of the work done by the Public Health Laboratory from August 1, 1920, to June 27, 1921:

1. Complement fixation test for syphilis:		
Blood specimens from physicians:		
Positive	767	
Negative	3,380	
Doubtful	327	
Unsatisfactory specimens	311	
Total		4,785
Blood specimens from Lansing:		
Positive	189	
Negative	557	
Doubtful	148	
Unsatisfactory specimens	46	
Total		940
Spinal fluids:		
Positive	29	
Negative	91	
Doubtful	12	
Unsatisfactory specimens	1	
Total		133
2. Examination of sputum for tuberculosis:		
Positive	248	
Negative	1,107	
Unsatisfactory specimens	60	
Total		1,415
3. Examination of cultures for diphtheria:		
Positive	839	
Negative	5,736	
No growth	1,162	
Unsatisfactory specimens	30	
Total		7,767
4. Examination of smears for gonococcus:		
From physicians:		
Positive	93	
Negative	296	
Unsatisfactory specimens	26	
Total		415
From Lansing:		
Positive	94	
Negative	1,335	
Unsatisfactory specimens	24	
Total		1,453
5. Examination of Widals for typhoid fever:		
Positive	135	
Negative	173	
Unsatisfactory specimens	73	
Total		381
6. Examination of stool cultures for typhoid fever:		
Positive	13	
Negative	78	
Unsatisfactory specimens	5	
Total		96
7. Miscellaneous examinations		170
Total number of examinations made		17,555

Report for 1922.

By William Levin, Director.

The Kansas Public Health Laboratory has become firmly established as an essential factor in the prevention and detection of communicable diseases. Its second year of existence has been one of expansion, both in the scope of its work and in the number of tests performed. The physicians of the state are responding, slowly to be sure, to the facilities offered them by the laboratory, and not a few have written of their appreciation for the work done for them. The laboratory enters upon its third year with great expectations.

PERSONNEL.

Since the last annual report the personnel has undergone several changes. William Levin, Dr. P. H., succeeded John J. Szymanski, M. D., as director, on September 1, 1921. Mrs. Marie Nicholas joined the staff in August as bacteriologist, and Adrian Kilbourne, in September, as part-time technician. Miss Margaret Scofield, serologist, has been with the laboratory since its consolidation in July, 1920. During the diphtheria epidemic in the fall of 1921 it was necessary on several occasions to augment the staff by several bacteriologists. Fortunately several skilled workers were available at that time, and with their help the work was kept up to date. Clerical help has always been available. It is well to emphasize at this point the urgent necessity of providing funds for emergency periods to cover the expenses which additional skilled help entail.

EQUIPMENT.

The equipment of the laboratory has been increased from time to time. Quantity lots of containers and mailing cases have been obtained to provide for the heaviest demands. A considerable number of containers and mailing cases sent to physicians are never returned. Whether they are hoarded, lost or sent elsewhere cannot be definitely determined. The extravagant requests of certain physicians for large numbers of containers and mailing cases have been always reduced to those numbers which experience has shown to be commensurate with their actual needs. Health officers alone have been furnished large numbers of containers and mailing cases, with the understanding that they were to issue them to the physicians within their jurisdiction. Since September 15, 1921, a record has been kept of all supplies furnished to physicians and other individuals.

With the purpose of enabling the laboratory to perform field work in cases of emergency, such as in epidemics, or to carry on investigations in the field pertaining to public health, a mobile unit was organized and equipped. This mobile unit consists of an incubator, autoclave, dry-heat sterilizer, and all necessary glassware used in connection with the required tests. A field microscope and any necessary stains are also available. This mobile unit can be shipped to any part of the state, quickly set up, and the required tests made with practically all the facilities that are available at the Public Health Laboratory. It has already been used, at this writing, in Atchison, Emporia and Winfield, where the milk supplies have been tested bacteriologically in connection with a survey carried out by the Division of Foods and Drugs.

LABORATORY METHODS.

With one exception there was practically no change made in the laboratory methods. This exception was in the complement-fixation test for syphilis, where the plain antigen and ice-box fixation was substituted for the acetone-insoluble antigen and the 37° C. fixation. The test as used at present, therefore, employs both the plain and the cholesterinized antigens. Details of more or less importance have been added to certain other tests in order to increase their accuracy. The methods now in use in this laboratory are similar to those in use in other well-established and well-known public-health laboratories of the country.

The forms on which reports are made have been changed somewhat. Stress has been and will be laid on the fact that laboratory findings do not, in themselves, make the diagnosis. They are valuable only when considered with the clinical findings. The increased number of commercial laboratories and the rather unusually large number of physicians who rely entirely upon the laboratory for their diagnoses make it imperative that the capabilities of the laboratory be strictly defined. The Public Health Laboratory is in the peculiar position where it can define the scope and limitations of the laboratory as applied to diagnosis better than any other type of laboratory, and it should, therefore, avail itself of this opportunity.

Since the World War the use of the medical laboratory has increased tremendously. Commercial, hospital and institutional laboratories have been founded to meet this increased demand. Unfortunately, the standards, the methods and the ideals of certain of these laboratories have not been consistent with good, thorough and scientific work. Quality gave place to quantity; thoroughness to carelessness and inaccuracy. This type of work could result only in a loss of confidence by the physicians in all laboratories. It was to prevent this, and also to determine whether the various laboratory men and women of this state desired to associate themselves in an organization the main purpose of which was to raise laboratory standards, that a meeting was called by the director of the Public Health Laboratory and held in Topeka on January 27, 1922. At this meeting, very enthusiastic and well attended, the speakers brought out and emphasized the urgent necessity of a high type of work. A temporary organization was perfected at this time. The first annual meeting was held in Kansas City, Kan., on April 12, 1922, and the laboratory workers permanently organized themselves into the Kansas Medical Laboratory Association. The director of the State Laboratory was elected secretary-treasurer. This organization will attempt to maintain high standards and to remedy those conditions which are not in strict accord with scientific work and medical ethics.

CERTIFICATION OF LABORATORIES.

The increased use of medical laboratories has always been strongly advocated by the director of the Public Health Laboratory, irrespective as to whether they were commercial, institutional or public in character. It is only just and proper to expect the medical laboratories of the state to perform that type of work which should be accurate and reliable. All medical laboratories perform work in the field of public health, and for that reason bear an important part in the identification, quarantine and eradication of communicable diseases. Under the laws of Kansas the State Board of Health, with its various divisions, is empowered to perform those functions which best safeguard the health of its citizens. For the best interests of public health, therefore, the Kansas State Board of Health should certify all laboratories performing tests which are within the field of public-health work. This certification need not be made compulsory; better coöperation would undoubtedly be obtained if it were voluntary. Certification of laboratories engaged in public-health work has been in successful operation in the state of New York for several years. The immediate effects of certification—carrying, as it does, the official approval of the State Board of Health—will be an increased faith in the work of the laboratories and a higher standard of work. No decrease in the rate incidence of communicable diseases may be expected so long as the various agencies employed are not intelligently and skillfully utilized. By requiring minimum standards of efficiency from the medical laboratories engaged in public-health work the State Board of Health will have obtained one of the strongest weapons in the fight against communicable diseases.

It should be understood that in return for this certification the medical laboratories should be given official recognition; that reports from certified laboratories, either in the placing in or in the release from quarantine, should be accepted by the proper health authorities as equivalent to reports from the State Public Health Laboratory.

LOCATION OF THE PUBLIC HEALTH LABORATORY.

It is unfortunate that the Public Health Laboratory cannot be housed in the same building with the other department of the State Board of Health. While the location at Washburn College is satisfactory from the viewpoint of laboratory space and facilities, it is most unsatisfactory from the viewpoint of efficiency. This is particularly true of the mail service. There are but two mail deliveries daily. Many specimens that arrive in Topeka after one p. m. are not delivered until the following morning, and the reports on these must necessarily be delayed at least twenty-four hours. There can be no question of an increased use of laboratory facilities so long as the mail service is inadequate. It is to be hoped that in the near future the laboratory will be located together with the other departments of the State Board of Health.

SPECIMENS EXAMINED.

For the year beginning with June, 1921, and ending with May, 1922, a total of 24,270 specimens were received and examined. These were divided as follows:

Diphtheria	12,602
Wassermann test	7,721
Gonococcus examination	1,943
Tubercle bacilli	1,367
Blood for Widal	371
Stools for typhoid	58
Miscellaneous	206
Total	24,270

The annual report of the state bacteriologist submitted June 26, 1919, gave the total number of specimens examined at 2,916.

For the eleven-month period beginning with August 1, 1920, and ending with June 27, 1921, a total of 17,555 examinations were made. While these figures are not strictly comparable, yet they indicate sufficiently the marked increase in the work of the laboratory. It is interesting to note that the highest number examined in 1920 were 3,356 specimens in November. In the same month in 1921 (also the peak month) 5,043 specimens were examined.

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BULLETIN
OF THE
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S. J. CRUMBINE, M. D., Editor.

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Wash your hands before eating.

Slow up during the hot weather.

Of course you can do it better!

If a "chicken" smiles at you—"safety first"!

The typhoid season is here—get vaccinated.

Walk a minimum of three miles of oxygen a day.

Leave your troubles at home when you take your vacation.

The "red plague" received a "solar plexus," when red booze was buried.

The use of saccharin in foods or drinks offered for sale in Kansas is illegal.

All unfly-proofed outside toilets are declared to be a public nuisance and subject to condemnation by the local health officer.

The use of any kind of solution for floating eggs unfit for food will not comply with the regulation requiring candling of eggs by dealers.

> *There are many troubles which you cannot cure by the Bible or hymn book, but which you can cure by systematic exercises and fresh air.*
>
> *—Henry Ward Beecher.*

MORBIDITY REPORT FOR JUNE, 1920.

COUNTIES AND CITIES.	Typhoid and Paratyphoid...	Smallpox........	Diphtheria........	Influenza.........	Scarlet Fever.....	Measles (morbilli)......	German Measles (rubella).......	Whooping Cough.	Chickenpox.......	Mumps...........	Pneumonia (acute lobar)........	Meningitis (epidemic)......	Tuberculosis.....	Other Diseases (see Addenda)..
THE STATE...........	71	390	59	1	84	689	5	469	120	66	19	5	167	333
Allen, except.........	0	0	0	0	1	0	0	0	0	0	1	0	1	1
Iola...............	0	1	1	0	0	14	0	0	0	0	0	0	0	0
Anderson............	0	1	0	0	0	0	0	3	0	1	0	0	0	0
Atchison, except......	0	1	1	0	0	0	0	0	0	0	0	0	0	0
Atchison city......	0	0	0	0	7	1	0	0	0	0	0	0	0	0
Barber..............	0	0	0	0	0	0	0	3	0	0	0	0	0	1
Barton, except.......	0	1	1	0	0	0	0	0	0	0	0	0	4	0
Great Bend........	2	0	0	0	1	1	0	0	1	0	0	0	0	0
Bourbon, except......	1	11	0	0	0	7	0	0	0	0	0	0	0	1
Fort Scott.........	0	12	0	0	0	5	0	1	0	2	0	0	0	0
Brown..............	1	4	0	0	1	12	0	0	3	0	0	0	1	0
Butler, except........	4	5	3	0	1	7	0	0	0	5	0	0	2	2
Augusta..........	0	1	0	0	0	6	0	0	0	0	0	0	0	0
El Dorado.........	0	39	2	0	3	14	0	1	0	0	0	0	0	0
Chase..............	1	0	0	0	0	4	0	11	1	3	0	0	0	1
Chautauqua.........	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Cherokee, except.....	2	1	0	0	0	4	0	7	0	0	0	0	2	4
Galena...........	2	0	0	0	0	1	0	0	0	0	0	0	0	0
Cheyenne...........	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Clark*............	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Clay...............	0	0	0	0	0	1	0	5	0	0	0	0	0	0
Cloud, except........	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Concordia.........	0	2	1	0	0	0	0	0	0	0	0	0	0	1
Coffey.............	0	0	1	0	2	1	0	0	0	0	0	0	0	0
Comanche...........	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cowley, except.......	1	0	0	0	0	8	0	0	0	0	0	0	5	1
Arkansas City.....	1	5	0	0	1	4	0	7	4	0	0	0	0	6
Winfield..........	6	0	1	0	1	18	0	5	3	1	0	0	0	1
Crawford, except.....	8	7	1	0	0	1	0	1	0	0	1	0	0	2
Pittsburg..........	2	18	1	0	0	4	0	1	3	0	0	0	2	2
Decatur............	0	1	0	0	0	1	0	0	0	0	0	0	0	0
Dickinson...........	1	9	0	0	3	3	0	3	1	1	0	0	0	0
Doniphan...........	0	6	1	0	5	1	0	4	0	0	0	0	1	0
Douglas, except......	0	0	0	0	1	0	0	4	2	0	0	0	0	0
Lawrence..........	0	3	0	0	0	2	0	0	0	1	0	0	0	5
Edwards............	0	1	0	0	0	1	0	0	0	0	0	0	0	1
Elk................	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Ellis...............	0	1	2	0	0	0	0	0	0	1	0	0	0	1
Ellsworth...........	1	0	0	0	0	3	0	15	0	0	0	0	2	5
Finney..............	0	4	0	0	0	1	0	0	0	1	0	0	1	0
Ford, except.........	1	1	0	0	0	1	0	0	0	1	0	0	1	0
Dodge City........	1	0	1	0	2	0	0	0	0	0	0	0	0	7
Franklin, except......	2	0	0	0	0	0	0	0	0	0	0	0	26	0
Ottawa............	0	0	1	0	0	0	0	0	0	0	1	0	0	0
Geary, except........	0	0	1	0	4	0	0	3	0	0	0	0	0	0
Junction City......	0	0	0	0	0	0	0	10	1	0	0	0	0	4
Gove*..............	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Graham.............	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Grant*.............	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Gray...............	0	0	0	0	2	0	0	4	0	0	0	0	0	0
Greeley*...........	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Greenwood..........	0	1	0	1	0	3	0	1	0	0	0	0	1	1
Hamilton............	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Harper..............	0	7	0	0	0	1	0	5	0	0	0	0	3	1
Harvey, except.......	0	4	0	0	2	0	0	0	0	0	0	0	1	0
Newton...........	0	23	0	0	3	1	3	1	1	0	0	0	0	0
Haskell.............	0	0	0	0	0	0	0	1	0	1	0	0	0	0
Hodgeman...........	0	0	0	0	0	6	1	0	0	0	0	0	0	0
Jackson............	0	3	0	0	0	0	0	0	0	0	0	0	0	0
Jefferson...........	0	0	0	0	0	1	0	0	1	0	0	0	0	0
Jewell..............	0	6	0	0	0	0	0	0	0	0	0	0	0	0
Johnson.............	2	0	0	0	1	1	0	0	0	0	0	0	1	0
Kearny.............	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Kingman............	0	2	0	0	0	0	0	0	2	0	0	0	0	1
Kiowa..............	0	1	0	0	3	2	0	28	6	0	0	0	0	0
Labette, except.......	0	0	0	0	0	0	0	2	0	0	0	0	0	21
Parsons...........	2	8	0	0	3	0	0	2	1	0	0	0	1	5
Lane...............	0	3	0	0	0	0	0	0	1	1	0	0	0	0
Leavenwoth, except...	0	0	1	0	0	2	0	0	0	1	0	0	0	0
Leavenworth city...	1	0	0	0	0	0	0	9	0	0	0	0	4	1

MORBIDITY REPORT FOR JUNE, 1920.

COUNTIES AND CITIES.	Typhoid and Paratyphoid.	Smallpox.	Diphtheria.	Influenza.	Scarlet Fever.	Measles (morbilli).	German Measles (rubella).	Whooping Cough.	Chickenpox.	Mumps.	Pneumonia (acute lobar).	Meningitis (epidemic).	Tuberculosis.	Other Diseases (see Addenda).
Lincoln	0	0	0	0	3	0	0	0	0	5	0	0	0	1
Linn	0	3	1	0	0	5	0	4	0	0	0	0	1	0
Logan	0	2	0	0	0	0	0	0	0	0	0	0	0	0
Lyon, except	0	1	0	0	0	10	0	0	0	0	0	0	3	0
Emporia	0	2	0	0	0	16	0	2	0	0	0	0	0	1
Marion	0	6	2	0	0	27	0	11	1	1	0	0	8	4
Marshall	0	13	1	0	0	27	0	5	3	0	0	0	3	7
McPherson	0	5	0	0	1	6	0	0	0	0	0	0	1	0
Meade	0	1	0	0	3	1	0	2	3	0	0	0	0	0
Miami	1	0	0	0	1	0	0	0	0	0	1	0	0	0
Mitchell	0	6	0	0	0	1	0	7	0	1	0	0	0	0
Montgomery, except	2	10	0	0	0	11	0	0	2	0	0	0	3	3
Coffeyville	1	1	2	0	1	10	0	2	0	1	0	0	7	4
Independence	3	2	1	0	0	10	0	1	0	0	0	0	3	5
Morris	0	0	0	0	1	1	0	0	0	0	0	0	0	2
Morton	0	3	0	0	1	0	0	0	0	0	0	0	0	0
Nemaha	0	0	0	0	0	0	0	1	0	0	0	0	0	1
Neosho, except	1	1	0	0	0	6	0	0	0	0	0	0	3	0
Chanute	0	0	0	0	0	5	0	0	1	5	0	0	0	3
Ness	0	1	0	0	0	0	0	0	0	0	0	0	0	1
Norton	0	1	0	0	0	12	0	2	1	0	0	0	0	0
Osage	0	6	0	0	0	0	0	1	1	0	0	0	1	3
Osborne	0	0	0	0	0	4	0	0	1	2	0	1	0	0
Ottawa	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Pawnee	0	5	0	0	0	4	0	4	1	0	0	0	0	0
Phillips	0	0	0	0	0	3	0	0	0	0	0	0	0	0
Pottawatomie*	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Pratt	1	0	0	0	1	1	0	1	1	2	0	0	3	1
Rawlins	0	0	2	0	0	1	0	2	2	0	0	0	2	0
Reno, except	0	0	0	0	0	0	0	5	0	1	0	0	2	0
Hutchinson	3	2	1	0	5	25	0	13	4	0	2	0	6	9
Republic	0	5	0	0	0	4	0	0	0	0	0	0	1	0
Rice	0	1	0	0	2	1	0	0	2	6	0	0	0	0
Riley, except	0	0	0	0	0	4	0	0	0	1	0	0	0	0
Manhattan	0	0	0	0	0	8	1	16	0	0	0	1	0	0
Rooks	0	0	1	0	1	0	0	0	0	0	0	0	0	0
Rush	0	1	0	0	0	14	0	7	0	5	0	0	0	1
Russell	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Saline, except	0	1	0	0	0	0	0	0	0	0	0	0	1	0
Salina	5	0	0	0	1	8	0	2	4	0	0	1	0	5
Scott	0	1	0	0	0	2	0	0	0	0	0	0	0	0
Sedgwick, except	0	0	0	0	1	0	0	0	0	0	0	0	0	1
Wichita	1	59	5	0	7	39	0	26	8	1	8	0	8	73
Seward	0	1	0	0	2	0	0	0	0	0	0	0	0	0
Shawnee, except	0	2	0	0	0	0	0	0	1	0	0	0	0	0
Topeka	7	14	4	0	2	138	0	169	39	1	1	1	2	30
Sheridan	0	0	0	0	0	2	0	1	0	0	0	0	0	0
Sherman	0	9	0	0	0	1	0	0	0	1	0	0	0	0
Smith	0	0	0	0	0	2	0	6	3	0	0	0	0	0
Stafford	0	3	0	0	0	0	0	0	0	0	0	0	0	0
Stanton	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stevens	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Sumner, except	1	4	3	0	1	8	0	9	1	0	0	0	27	3
Wellington	1	8	1	0	0	0	0	1	5	1	0	0	0	4
Thomas*	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Trego	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Wabaunsee	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Wallace	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Washington	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Wichita	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Wilson	3	3	3	0	1	51	0	3	2	4	0	0	0	0
Woodson	0	0	0	0	0	1	0	1	0	3	0	0	0	0
Wyandotte, except	0	1	2	0	1	0	0	0	0	0	0	0	0	1
Kansas City	2	7	10	0	0	75	0	28	3	5	4	1	22	47
Rosedale	0	0	0	0	0	0	0	0	0	0	0	0	0	44

* No report.

Other communicable diseases: Cancer, 24; chancroid, 13; erysipelas, 1; gonorrhœa, 177; malaria, 2; pellagra, 1; syphilis, 107; tetanus, 1; trachoma, 7.

The Full-time Medical Health Officer.

AN ESSENTIAL IN THE EFFICIENCY OF THE MODERN PROGRESSIVE COMMUNITY.

In years gone by in many of the relatively prosperous towns of Illinois there were maintained volunteer fire departments. The lawyer, the doctor, the butcher, the baker and the candlestick maker were expected to jump from their jobs on the sound of the fire bell; to rush to the shed which housed the antiquated six man-power fire pump and to go galloping off to the rescue whenever occasion demanded. If there was a baseball game or a county fair or any other unusual event, the fire department was completely demoralized, and not infrequently the fire engine was so badly rusted that it would not work, or the hose so rotted that it bursted in the face of emergency.

The volunteer fire department and the six man-power pump have been abandoned in even the smallest communities, because it was recognized that such unreliable, inadequate, irresponsible protection was too expensive for even a relatively intelligent and progressive town.

Human life is worth more than buildings of brick and stone. A case of scarlet fever is often more costly than the burning of a business house, and yet, while the obvious relationship between the fire department and health protection has been generally recognized, the relationship between the health department and life and health protection still seems more or less remote in the minds of the average citizen. It seems to be well within the mental grasp of the average public official that a burning shed may be the beginning of a great conflagration, and that consequently the utilization of fire equipment, costing thousands of dollars, on a burning shed is a matter of ordinary sense. It does not seem to be so greatly appreciated that an isolated case of mild type scarlet fever may be the beginning of a great epidemic, more costly than the burning of a town, and consequently it does not appear to be necessary to utilize efficient and valuable apparatus in controlling this isolated case of communicable disease.

At the present time, in many of the larger towns of Illinois, there is still to be found a health department very similar to the old-fashioned volunteer fire department, with its antiquated and rusted six man-power fire pump. The butcher, the baker, and candlestick maker, without the slightest knowledge of disease prevention, often constitute a so-called "board of health," which will receive their attention when they are not engaged with their everyday pursuits. There is often a physician constituting the "apparatus" of the department, and not infrequently he is so rusty in matters of public health that he "will not work" when the emergency arises. Auxiliary equipment of laboratories and other essential public health outfit, without which the department cannot function effectively, are entirely lacking, and thus many prosperous Ilinois towns and cities, whose men and women and children are worth a hundred times more than all of their buildings, factories and business houses, are rely-ing upon antiquated apparatus which will not work and upon so-called "protection" which will not protect.

No wonder the cost of our annual conflagration of preventable disease runs into the millions of dollars every year.

A fire department used part of the time for the protection of property and the rest of the time as a delivery truck for a privately owned butcher shop would not prove very effective. If a fire occurred on Saturday afternoon, when the butcher was particularly busy on Sunday orders, the flames would have to go unabated because the butcher business or the private meat business must not suffer. In a great many communities in Illinois the equipment of the health department consists of a man who is supposed to devote to the health of the people such of his time as is not devoted to his own private business and affairs. At times he is a busy doctor. As a rule his compensation is so meagre that even if he devotes a few hours a week he is doing more than he is paid for. When an epidemic occurs—when there are scores of acutely sick people in the community—at the very time when his whole attention should be given to the protection of the health of the people—he finds himself overwhelmed by the demands of his private practice.

This was notoriously true during the two serious epidemics of influenza which visited the nation within the past few years. Health departments without physicians proved practically useless. Health departments provided with part-time medical service crumpled up and caved in, because the doctors who were obligated by receiving a pittance to render health service were overworked in private practice. A system of part-time health officer is unqualifiedly a failure regardless of the few instances of high-grade medical men who have been willing to sacrifice their private interests for the public weal. The public has no right to ask such personal sacrifice and a thoroughly self-respecting community would hardly care to accept such charity.

Insurance companies and health authorities have demonstrated that the span of human life has been increased fully six years within the past generation by reasonable attention to preventive medicine, and it is contended that with the application of our present knowledge of human life death may be deferred many years. In this day of reasonable education it seems almost ridiculous to have to argue the tremendous importance of extending the span of human life or of preventing unnecessary death and disease. The importance of protection of property through police departments, or the prevention of fires through fire departments, sink into comparative insignificance as compared with the intelligent protection of the lives and health of the people. It has been said so often that it seems vain repetition that a community can have as much health or as little health as it is willing to pay for.

And yet, in many of the larger towns and cities of Illinois, there are still being maintained health departments so primitive, so inefficient, so poorly manned and so poorly equipped as to be worse than useless—worse than useless because there is an existing pretense of health protection in which unknowing people may place their confidence, and in so doing may suffer greater injury than they would in the primitive community in which government is not established, and in which every man is expected to look out for himself and for his household.

There should be a full-time medical health officer in every city of over 10,000 in the state of Illinois, and every acre of every county in the state should be under the jurisdiction and supervision of such a trained official. —*Illinois Health News.*

NOTE.—Substitute the name Kansas for Illinois and thus apply the principles herein so well illustrated to our own state.—EDITOR.

How to Cure Chronic Constipation.

By JOHN P. KOEHLER, M. D.

By far the most common ailment met with in the human race is constipation. It is prevalent at all ages, beginning during infancy and continuing throughout life.

The causes of constipation are so numerous and so complicated that we will not attempt to explain them at this time, but will devote our efforts to the treatment. There are very few people who do not know how to treat constipation, but there are many who do not know how to cure it. Anyone can advise laxative drugs, teas, enemas or suppositories, which may give temporary relief, but never cure constipation. Laxative drugs will, in nearly all cases, never cure constipation, but in most instances make it worse. Nothing should be done to produce an artificial evacuation of the intestinal tract unless there are other reasons than constipation. The best cure for constipation, when not accompanied by any symptoms of disease, is to let it alone. No one can state positively how frequently any individual should have a bowel movement, and it therefore becomes advisable to let nature do the regulating. Many times nature may need a little assistance from us, not by the use of drugs and mechanical methods, but by right living.

Right living consists of good habits. No one can eat foods that are constipating and expect to be relieved of constipation. Fine, smooth and concentrated foods must be supplemented with coarse and bulky foods. Cooked foods as a rule are more constipating than raw foods. A little bran in bread, breakfast cereals or plain bran is the best food laxative we know of. A glass of hot water before retiring and before breakfast, gives some results. People leading a sedentary life should walk enough to stimulate their circulatory system. The intestines need good red blood to keep up their tonicity.

Last but not least, it is necessary to establish regular habits. A child a few months old can be trained to have an evacuation at a definite time each day. The tendency of to-day is to have time for everything else excepting to heed nature's calls. Children must be taught to stop playing and adults to stop working, whenever there is the least premonition of a bowel movement. Piece and premium work in factories, we are certain, encourage workers to postpone bowel action. We must also get away from this inexcusable false modesty. Many people, when away from home, are ashamed to ask where the bathroom or toilet room is, because they do not want to admit publicly that they are human enough to require such necessities. No matter how refined or cultured we may become, we will never be able to dispense with toilet facilities, and that being the case, why not admit it whenever necessary?

There are other things that must be done in some cases to relieve constipation, but in most cases, food, exercise, and habits will do the work.

Typhoid and Its Prevention.

IMMUNIZATION BY VACCINATION.

It has been estimated that the purification of all water supplies, perfect sewering or rigid screening and supervision of outdoor closets would result in the reduction of the annual typhoid rate to less than 14 per 100,000.

Below this point, further reduction to the *residual* typhoid level must be attained through control of all cases of typhoid infections, protection of milk and other food supplies from typhoid organisms, destruction of flies and their breeding places, proper oversight of typhoid "carriers" and the *use of typhoid vaccines.*

Typhoid fever can never be eliminated as a menace to public health so long as gross pollution of the food and water supplies exists. That its sinister influence may be materially reduced by antityphoid vaccination, even under the most adverse circumstances, has been proved by the experience of the American forces in France. With bad sanitary conditions, and no antityphoid vaccination, there would have been an expectancy of 100,000 cases of typhoid and paratyphoid infections. With the worst of sanitary conditions, with exhausted troops, whose resistance was below par from heavy fighting and privations, but all vaccinated against these infections, there occurred only a little over 1,000 cases.

The annual summary for typhoid fever in 1919 appeared in the *Journal American Medical Association* for March 6, 1920. This shows that the typhoid rate for a population of about 27,000,000 reached the exceedingly low point of 4.2. The editorial comment on this proportionately large diminution is that the most plausible explanation would seem to be that antityphoid vaccination of the young men in the military camps has proved a continuing safeguard for this age group which ordinarily would have furnished a considerable number of typhoid victims.

I have been impressed with one curious attitude of human psychology. While the desire to live is the ruling passion, efforts to secure long life are extremely unpopular. There is nothing about which the average American is more indifferent than his own well-being and that of his children. He appreciates good health only when overtaken by disease. He values wholesome food only when his digestive apparatus is seriously impaired by eating unwholesome food.—*H. W. Wiley, M. D.*

Fitter Families for Future Firesides.

The State Free Fair at Topeka has taken a forward look when its secretary added a new department to its stock-judging division and provided premiums for winners in this department in like manner to winners in the other departments devoted to the raising of superior horses, cattle, sheep and pigs. The announcement in their annual catalogue tells its own story:

DEPARTMENT S—EUGENICS.

Superintendent, DR. FLORENCE BROWN SHERBON, Chief, Division of Child Hygiene, State Board of Health, Topeka.

Dr. Sherbon will be assisted in this department by Mrs. Mary T. Watts, of Audubon, Iowa, who originated the movement for examining children of the pre school age at the Iowa State Fair in 1911.

Slogan: "Fitter Families for Future Firesides."

Object. To apply the well-known principles of heredity and scientific care which have revolutionized agriculture and stock breeding to the next higher order of creation—the human family.

Method. 1. The method of making the examinations is being worked out according to the methods of the Federal Children's Bureau; the National Council of the National Educational Association on Health Problems in Education; the Life Extension Institute; the National Committee on Mental Hygiene and the American Genetic Association.

2. Children up to 72 months will be examined in the pre-school class; from 73 months to 17 years in the school age class; 17 years and above will constitute the adult class. All entrants will be given individual examinations and graded as individuals.

3. All entrants will be given mental examinations and tests.

4. All entrants will have their heredity and eugenic history taken under the instruction and by the outlines of the Eugenics Registry office, Carnegie Foundation, Cold Springs Harbor, New York.

5. The results of various examinations will be assembled in a written report, a copy of which will be given to each individual or family. This should furnish the best possible basis for a continuous family history.

Regulations.

1. Children or adults of any age will be examined and scored separately.

2. The family will be appraised from these individual examinations plus the eugenic history.

3. Individuals may be entered singly or in family groups.

4. Examinations will be made privately and winning scores only will be announced.

5. The hours for examinations will be 9 to 12 a. m.; 2 to 5 p. m., daily. Place of examination, Eugenics building.

6. Entries received up to and including September 15. Names kept confidential.

7. Entrants must be punctual or lose appointment.

Awards: All entrants will be scored A, B, C, or below.

1. All Grade A entrants will receive a Capper Medal given by Senator Arthur Capper and a Board of Health "Certificate A."

2. All Grade B entrants will receive a Board of Health "Certificate B."

3. All Grade C entrants will receive a Board of Health "Certificate C."

4. The family receiving the highest grades for all its members, and showing an acceptable eugenic record, will be awarded the Governor's Silver Trophy, given by Gov. Henry J. Allen.

Class.	*Division 203—Human Stock.*
2600	Pre-school children, 1 month to 72 months, inclusive.
2601	School children, 73 months to 16 years, inclusive.
2602	Adults, 17 years and above.
2603	Father, mother, one or more children.
2604	Pair, man, wife, no children.

The City Dump.

If every person maintaining a nuisance could be prosecuted, it is pretty safe to say that fully two-thirds of the heads at the helm of the average city governments of the state would be subject to penalty for gross neglect of that colossal fly breeder—the city dump. We saw one recently. It was a collection of brush, tin cans, manure, garbage, night soil, dead animals, and putrefying odors. By way of description, it would beggar the imagination of Dante, or the facile pen of Poe, to do full justice to all of its horrors of putrefactive, fermentative and maggot breeding possibilities. As a shock to the olfactory sense, we know of no words to fit the occasion except a quotation which tells of an odor "which was a combination of two skunks fighting at midnight in a badly kept graveyard, between a rubber vulcanizing plant, a glue factory and a bone ash kiln." In fact it was neither esthetic to view, nor to write about.

But the condition is far too common, and while the annual clean-up is on, why not settle the problem of the city dump as well? There may be some advantage to the transfer of garbage from many scattered small heaps within the city limits to one huge one beyond the city limits, but it is still insisted that the big heap remains productive of many varieties of the fly nuisance. What to do with the city garbage is a problem which has caused many unnecessary gray hairs on the polls of the "city dads," considering how easily it may be solved. Garbage should be *burned* or *buried.* Every city cannot afford a destructor for its needs in this line, but an acre of waste ground, a few gallons of kerosene or crude oil and a match, make a pretty fair substitute.

In a series of experiments, the State Board of Health of Ohio determined that garbage, including tin cans, buried in trenches under one to two feet of earth, would be reduced so that soil would be fit for cultivation in two years. Furthermore it was good for the soil.

So while the clean-up is in progress don't overlook the ultimate disposal of your trash. It behooves city governments to maintain sanitary standards if they would have individuals to pattern after them. Don't permit your city dump to remain a nuisance and a menace.

Does this fit your town? *Swat the fly.—Montana Bulletin.*

Termination of Cases Prosecuted for Violation of Food and Drugs Law and Regulations, October 1, 1919, to June 1, 1920.

DIVISION OF FOODS AND DRUGS, K. S. B. H.

Defendant, Town, Violation, Date of Termination, Inspector's Number, Amount of Fine and Costs.

Lewis Merc. Co., Rossville. Offering for sale eggs unfit for food. Oct. 2, 1919. $5 and costs. I. and Da.

O. M. Shaw, Dwight. Offering for sale eggs unfit for food. Oct. 3, 1919. $5 and costs. I. and Da.

C. J. Hagenmaier for Nortonville Merc. Co., Nortonville. Offering for sale eggs unfit for food. Oct. 7, 1919. $10, 50 cents. I. and Da.

Fred Smethers, Elmdale. Offering for sale eggs unfit for food. Oct. 10, 1919. $5, $1.70. I. and Da.

W. B. Goad, Wonseva. Offering for sale eggs unfit for food. Oct. 10, 1919. $5, $1.70. I. and Da.

M. F. Sayre for Farmers Coöp Supply, Ensign. Offering for sale eggs unfit for food. Oct. 20, 1919. $5, none. I.

E. W. Nickels, mgr. Dodge City I. C. & Prod., Dodge City. Sale adulterated ice cream. Nov. 11, 1919. $25, $4.65. I.

H. M. Howard, Popular Cafe, Dodge City. Unprotected display of bakery products. Nov. 13, 1919. $5, $4.65. I.

J. C. Trent, Dodge City. Sale substandard milk. Nov. 15, 1919. 93221 to 93225, 93228 to 93230. $25, $4.65. I.

T. H. Traynor, Dodge City. Sale short-weight bread. Nov. 10, 1919. $10, $4.65. I.

Holon Creamery Co., Holton. Manufacturing adulterated ice cream. Nov. 13, 1919. 72021. $25 and costs. Da.

R. F. Stallard, Elkhart. Sale short-weight bread. Nov. 19, 1919. $25, $3.50. I.

E. I. Gordon, Hugoton. Sale adulterated milk, 4 counts. Nov. 19, 1919. 93298 to 93302. $50, $4.60. I.

Gillmore & Taylor, Elkhart. Sale substandard ice cream. Nov. 19, 1919. 93250. $5, $3.50. I.

E. A. Schell and Leon Schell, Iola. Sale substandard ice cream. Dec. 1, 1919. 72000 to 72001. $50, $7.15. D. and Da.

A. J. Meyers, Oskaloosa. Keeping for sale meat unfit for food. Dec. 1, 1919. $25 and costs. Da.

J. E. Neal, Ramona. Offering for sale eggs unfit for food. Dec. 1, 1919. $5 and costs. Da.

Liberal Equity Coöp. Creamery, Liberal. Manufacturing adulterated ice cream. Dec. 8, 1919. 93297-8. $25 and costs. I.

C. B. Jenson, mgr., Liberal Equity Coöp. Creamery & Prod. Co., Liberal. Manufacturing adulterated ice cream. Dec. 3, 1919. 93297-8. $25 and costs. I.

B. D. Cawthon, Bucklin. Offering for sale short weight. Dec. 8, 1919. $5, $1. I.

Jno. Dexter, Marysville. Sale of dirty milk. Dec. 9, 1919. $5, $5.85. Da.

J. C. Herriott, Leavenworth. Sale milk adulterated with water. June 17, 1919. $50 and costs. N.

G. A. Stanwix, Leavenworth Co. (Six Corners). Sale milk adulterated with water. June 17, 1919. $50 and costs. N.

Sol Hoffine, Murdock. Insanitary grocery store; sale misbranded cider; use false balance to weigh food. Dec. 22, 1919. $35, $12.35. I.

P. B. Ratzlaff, Murdock. Insanitary grocery store. Dec. 22, 1919. $40, $9.35. I.

John Bowers, Wellington. Sale short-weight bread. Dec. 31, 1919. $10, $11.35. I.

E. Bauman, Wellington. Sale short-weight bread, insanitary bakery (2 counts). Dec. 31, 1919. $40, $11.35. I.

John Sillas, Wichita. Sale substandard ice cream. Jan. 6, 1920. 22743. $5, $17.60. R.

Khlentzos Bros., Wichita. Sale substandard ice cream. Jan. 6, 1920. 22741. $10, $12.20. R.

Wm. Miks, Wichita. Sale substandard ice cream. Jan. 6, 1920. 22742. $10, $10.90. R.

Ed Ceros, Wichita. Sale substandard ice cream. Jan. 6, 1920. 22744. $10, $10.75. R.

W. M. Buck, Emporia. Insanitary slaughterhouse. Jan. 20, 1920. $5, $9.55. B.

J. W. Achelpohl, Argonia. Insanitary grocery. Jan. 22, 1920. $10, $3.50. I.

Joseph C. Davis, Argonia. Sale of short-weight bread. Jan. 23, 1920. $5, $3.50. I.

S. G. Furlong, mgr., Farmers' Union, Agra. Offering for sale eggs unfit for food. Jan. 28, 1920. $10 and costs.

Daub Brothers, Strong City. Insanitary grocery. Feb. 5, 1920. $1, $6.50. B.

W. H. Cooper, jr., Spring Hill. Sale short-weight, unlabeled bread. Feb. 6, 1920. $5; $7.50. F.

Layton & Neilson, Concordia. Sale substandard essence of peppermint. Feb. 10, 1920. $5, $5.50. F.

F. F. Sorgatz, Concordia. Sale substandard essence of peppermint and spirits of camphor. Feb. 10, 1920. $5, $5.50. F.

Lee Clark Drug Co., Beloit. Sale substandard spirits of camphor. Feb. 11, 1920. 50117. $5, $1. F.

Defendant, Town, Violation, Date of Termination, Inspector's Number, Amount of Fine and Costs.

Frank Barnett, Cuba. Offering for sale eggs unfit for food. Feb. 18, 1920. $10 and costs. I. and Da.

J. C. Fuger, Fairview. Sale adulterated drugs. Feb. 25, 1920. $10 and costs. Da.

Horst Drug Co., Seneca. Sale adulterated drugs. Feb. 26, 1920. $5 and costs. Da.

Sherwood Drug Co., Sabetha. Sale substandard drugs. Feb. 27, 1920. $5 and costs. Da.

Brokaw Pharmacy, Hiawatha. Sale substandard essence of peppermint. March 3, 1920. $5 and costs. Da.

J. H. Ellis, Highland. Sale substandard tincture of iodine. March 4, 1920. $5 and costs. Da.

John Paul, Independence. Offering for sale unprotected food products. March 4, 1920. $10, $10.75. I. and D.

Volz Bros., Independence. Short-weight bread, insanitary bakery. March 4, 1920. $50, $10.75. I. and D.

Thos. E. Hill, Baldwin. Insanitary butchershop. March 6, 1920. $5, none. F.

W. H. Hoover, St. George. Violation regulation 1, sanitary laws. March 11, 1920. $5, $1.50. F.

Robb Scott (Scott Bros.), Independence. Insanitary store, use of short-weight measure. March 11, 1920. $15, $8.45. I and D.

J. C. Staake, mgr., Woolworth's, Wichita. Uncovered candies. March 19, 1920. $1, $9.35. Da. and I.

Carl Senger (Royal Bakery), Wichita. Insanitary bakery. March 19, 1920. $60, $9.35. Da. and I.

A. T. Sayers, Wichita. Keeping for sale and sale of dirty milk and cream. March 19, 1920. $10, $10.25. F. and G.

J. D. Mosely, mgr., Lang Merc. Co., Wichita. Insanitary store. March 19, 1920. $50 and costs. B. and D.

J. H. Butler, Wichita. Sale short-weight bread. March 19, 1920. $25 and costs. D., Da. and F.

Wm. Mikes, Wichita. Insanitary store. March 23, 1920. $20. I. and Da.

Snitz & Snell, Wichita. Insanitary bakery. March 19, 1920. $25, $9.30. F. and G.

Brayton Campbell, mgr., Wichita. Sale short-weight bread. March 25, 1920. $25, $19.55. I.

Khlentzos Bros., Wichita. Insanitary store. March 25, 1920. $5 and costs. I. and Da.

E. Paulin, Wichita. Sale decomposed meat. March 23, 1920. Case dismissed by county attorney on account of insufficient evidence.

C. S. Wilson, Parsons. Sale substandard milk. March 30, 1920. $25, $7.35. I. and D.

R. T. Wilson, Parsons. Sale substandard milk. March 30, 1920. $25, $7.35. I. and D.

G. W. Matlock, Wichita. False and misleading scale. March 30, 1920. $5 and costs. D. and G.

J. E. Dickerson, Parsons. Sale substandard milk. April 6, 1920. $25, $7.35. I. and D.

J. H. Holt, Parsons. Sale substandard milk. April 6, 1920. $25, $7.35. I. and D.

M. Coffey, Parsons. Sale substandard milk. April 6, 1920. $25, $7.35. I. and D.

Geo. VanHoorsbeke, Parsons. Sale substandard milk. April 6, 1920. $25, $7.85. I. and D.

E. L. Cockerell, Parsons. Sale substandard milk. April 7, 1920. $25, $7.35. I. and D.

A. R. Adams, Easton.

W. G. Arnett, Argonia. Sale of meat unfit for food. April 27, 1920. $25, $5.50. I. and Da.

J. C. Jackman (Sanitary Ice Cream Co.), Independence. Manufacturing substandard ice cream. April 27, 1920. $10, $7.85. I. and D.

Frank W. Turner, Independence. Sale of substandard milk. April 27, 1920. $10, $7.85. I. and D.

Bert Johnson (Sanitary Ice Cream Co.), Parsons. Sale of substandard ice cream. April 27, 1920. $25, $7.50. D.

Gardner & Dexter, Marysville. Sale of dirty milk. May 4, 1920. $5 and costs.

M. Schilz, Clay Center. Insanitary meat market, slaughterhouse, and transporting meat not properly protected from contamination. May 5, 1920. $25, $3. F.

Geo. Heimerich, Clay Center. Insanitary meat market and uncovered food and meats. May 6, 1920. $25, $3. F.

John Klingenberg, El Dorado. Uncovered pies. May 10, 1920.

D. E. Crocker, El Dorado. Insanitary refrigerator and uncovered bakery goods. May 10, 1920. $10, $6. I. and S.

S. C. McCool, El Dorado. Uncovered goods. May 10, 1920. $10, $6. I. and S.

Robt. Seamster, El Dorado. Uncovered bakery goods. May 10, 1920. $10, $6. I. and S.

Wm. Holt, El Dorado. Uncovered bakery and other foods. May 10, 1920. $10, $6. I. and S.

F. R. Sturgeon, El Dorado. Uncovered pies and insanitary kitchen. May 10, 1920. $10, $6. I.

E. J. VanWinkle, El Dorado. Uncovered candy, cake, sliced and ground meat, etc., insanitation. May 8, 1920. $10, $6. I. and S.

A. E. Van Dine, Augusta. Sale short-weight bread, not labeled. May 11, 1920. $10, $4.50. I. and S.

Ed C. Tro, Augusta. Offering for sale unprotected food products. May 11, 1920. $10, $5.50. I. and S.

J. T. DeShurley, Augusta. Offering for sale unprotected food products. May 12, 1920 $10, $3. I. and S.

A. F. Rissinger, Towanda. Short-weight bread and uncovered bakery goods. May 14, 1920. $20, $6. I. and S.

Defendant, Town, Violation, Date of Termination, Inspector's Number, Amount of Fine and Costs.

W. E. Burkly, Arkansas City. Sale short-weight bread. May 25, 1920. $15, $4.50. I. and J.
H. A. Derry, Arkansas City. Sale short-weight bread, not labeled. May 25, 1920. $15, $4.50. I. and J.
H. L. Coulson, Arkansas City. Sale short-weight bread, not labeled. May 25, 1920. $5, $4.50. I. and J.
Wm. Ulrich, Arkansas City. Sale short-weight bread, not labeled. May 25, 1920. $15, $4.50. I. and J.
I. E. Cornell, Arkansas City. Sale short-weight bread, not labeled. May 25, 1920. $5, $4.50. I. and J.
Jake Miller, Hutchinson. Substandard milk. June 6, 1919. $5 and costs. I.

Whooping Cough.

PERTUSSIS VACCINES AS PROPHYLACTIC AND THERAPEUTIC AGENTS.

Experience with the appropriate vaccines since 1909 indicates their apparent value both as prophylactic and as active therapeutic measures. The first observers used a vaccine composed only of various strains of the pertussis bacillus. Their dosage was comparatively low. More recent work suggests the strong advisability of employing a vaccine which contains not only strains of the pertussis bacillus but strains of the other organisms found commonly associated with it, or supplanting it after the first week or ten days of illness. The success attending the use of the mixed antigen for the prevention of respiratory catarrhs makes the mixed pertussis vaccine a logical procedure in cases where exposure to whooping cough has occurred. Much larger doses are now used. Children who have come in contact with whooping cough or those likely to be exposed to the infection during an epidemic of the disease may be given prophylactic vaccination with reasonable assurance of its protective value. The administration of the vaccine is harmless.

Potatoes Increase Alkalinity.

I would make especially emphatic that the most valuable portion of the potato is situated in the thirty-secondth of an inch upon the periphery of the tuber. There we find the most nourishment. This is called the "cortical layer." The inside of the potato is nearly all starch.

Now, don't get the idea that I am favoring an excessive use of the potato. A potato diet is one-sided. In one of the last letters Doctor Dewey, the hygienic writer, sent me, he declared that he had found the "elixir of life" in a potato diet. And then he up and died shortly after.

And while we are talking potatoes, let me say that there are but few ways to properly cook them. Best of all is to bake them and serve while mealy and hot. To prepare they should be thoroughly scrubbed with a stiff brush, all spots removed, and then they are to be eaten entire.

White potatoes, prepared as I have described, are the most easily digested of the starchy foods, with the possible exception of rice. They have a tendency to increase the alkalinity of the blood.—*E. E. Keeler, M. D.*

Dirty People Make Dirty Towns.

It is twice as hard to do one's work well in a dirty place as it is in a clean one. It is as bad to live in a dirty town as it is to live in a dirty house. The reason we have so many dirty towns is because there are so many dirty people. Some towns smell bad, but in such the inhabitants smell bad first. No town is in itself bad; it is the people who are bad. The town is a mirror. It reflects the people. A man who is clean in mind will be clean in person; he will have a clean front yard and a clean back yard.

A littered dooryard and dilapidated house reflect a littered and dilapidated mind. If an overrunning outhouse borders the alley it is because the instinct of decency and cleanliness is woefully absent in the owner or tenant, or both. The old proverb, "Cleanliness is next to Godliness," was changed by Gov. Thomas R. Marshall to "Cleanliness is essential to Godliness." No cleanliness, then of course no godliness. A dirty town is an ungodly town.

Some towns, yes many towns, have flies on them. They have flies on them because they are dirty. They are ungodly for that very reason. A town may have several churches and many church-going people, but if it is a dirty town it is ungodly. I sat on the porch of a house in a certain town one summer evening. It was hot and sultry. Every once in a while a gentle movement of the air would bring foul odors to my nose. What kind of people are they who permit such things? Are they strong minded?

Think of people so disposing of their sewage as to poison the air and make it possible for flies to transport unspeakable filth to their food. Why shouldn't such people have typhoid fever? They invite it, don't they? Surely every man is the architect of his own misfortunes. Foul surroundings and flies breed typhoid.

A naturally dirty man cannot be made into a clean man. It is because he is a dirty man. It is an iron law of nature that only those may be saved who can accomplish their own salvation. Dirty towns will disappear when clean people predominate. "Slow Town" will always smell and have flies on it.—*J. N. Hurty, M. D., Secretary Indiana State Board of Health.*

"Health is the essential factor in productiveness, prosperity, and happiness, and hence in the advancement of civilization."—*Sir Frederick Treves.*

Oh, measles "are" or measles "is"
Enough to vex a saint;
But Johnny's bravely over his
And says that measles "ain't."
—*Tennyson J. Daft.*

Help! Help! But There is No Help!

The effective plans of work of organized communities are in splendid contrast to the wild confusion manifested in times of epidemic disease in places where health organization has been made of secondary, or perhaps tenthly, importance. Such communities at such times are wildly scrambling for a man who will leave his urgent private interests and give his time to taking care of the public. They find, however, that it is quite impossible to get such a physician under ordinary circumstances. The doctor who has been willing to pose as county health officer at a compensation of $100 per year, or some such figure, is now called upon to leave his own practice and give all of his time to the work of his county. The commissioners are willing to pay him almost any sum that he demands, even to pay for one week's work the hundred dollars that would ordinarily be considered proper compensation for a year's service. But no doctor who is not permanently employed in public-health work, can afford to leave his practice during these critical times of epidemic for any sum the commissioners may vote, for he knows very well that to accept $100 per week for five or six weeks, and desert his private practice would prove to be a very poor bargain for him, when at the end of the special weeks he attempted to once more pick up the practice among his old patients, only to find that it has gone from him forever.

It becomes, therefore, obligatory on the health boards of these unorganized counties to make the best of volunteer services and such odds and ends of time as a physician may be able to spare from its own urgent private work. As a consequence, people in the county simply take what is left over after private interests are served. Urgent calls are made to which there is no response. If vaccination is given it is in a desultory fashion that is of little value excepting to a few people who are so fortunate as to be able to get it from their own family doctor. There is no one to enforce quarantine laws, and therefore contagion spreads broadcast. The people feel, as well they may, that disaster is upon them, and become panic stricken.

Surely no one can contemplate the plight of a community that is not permanently organized by a public-health unit and compare it with the safety of one where a proper organization prevails, without seeing the immense advantages of the wise expenditure of a portion of the public moneys for the permanent employment of a physician who is paid to give his entire attention to the preservation of the health of the public.

Old Father Hubbard went to his cupboard,
To tickle his palate, that's all;
In 48 hours, a prayer and some flowers—
Alas! It was wood alcohol.

—*Exchange.*

To the Men of America.

You talk of your breed of cattle,
  And plan for a higher strain;
You double the food of the pasture,
  And heap up the measure of grain;
You draw on the wits of the nation.
  To better the barn and the pen;
But what are you doing, my brothers,
  To better the breed of men?

You boast of your Morgans and Herefords,
  Of the worth of a calf or a colt,
And scoff at the scrub and the mongrel
  As worthy a fool or a dolt;
You mention the points of your roadster,
  With many a "wherefore" and "when,"
But, ah, are you conning, my brothers,
  The worth of the children of men?

And what of your boy—have you measured
  His needs for a growing year?
Does your mark as his sire, in his features,
  Mean less than your brand on a steer?
Thoroughbred—that is your watchword
  For stable and pasture and pen—
But what is your word for the homestead?
  Answer, you breeders of men.

—*Rose Trumbull, Scottsdale, Ariz*

A Sprig Poeb.

What is this joyous feelig,
This woddress, woddress thig?
Cad it be tha cobbing
Of gladsob, gladsob sprig?
Wutz bore buds will be bloobig;
The balby air of sprig
Will bake the youngsters happy,
Ad bake the birdies sig.
I'b waitig for the subber,
To sbell the fragrat rose,
By thed I pray to goodness,
I'll be rid of this cold id the doze.

The Baby.

Who rules the house and all within?
Who often needs a safety pin?
Who makes you glad she's not a twin?
The baby!

Who is a precious 'ittle dear?
Whose little ways are often queer?
Who moves old bachelors to sneer?
The baby!

Who wakes at night, and wants a dwink?
Whose rosy posey toes are pink?
Who from the bottle doesn't shrink?
The baby!

Who wakes at 4 a. m. to yowl?
Who when you lift her, starts to howl?
Who looks as wise as any owl?
The baby!

Who can upset your every plan?
Who plainly shows she knows she can?
The baby!

—*The Somerville Journal.*

BULLETIN
OF THE
Kansas State Board of Health

Published Monthly at the Office of the Secretary of the Board, Topeka, Kan.

S. J. CRUMBINE, M. D., Editor.

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Refuse to be ill.—Lytton.

How do you like our new laboratory service?

The rat is a menace both to health and to wealth.

The course of life is decided by the weakest organ.

The rat costs Kansans $32,000,000 annually. Kill the rat!

Most of our worries are excess baggage that need not be carried.

Sanatorium care and treatment and not climate offers the best hope for the cure of pulmonary tuberculosis.

There is only one way to put the rat and mouse out of business—starve by removing or protecting all food from them. Starve the rat!

A Kansas farmer said the other day, "The rats shelled at least a half bushel of corn in almost every corn shock in my field last year." "Bat the rat!"

MORBIDITY REPORT FOR JULY, 1920.

COUNTIES AND CITIES.	Tuberculosis	Typhoid and Paratyphoid	Smallpox	Diphtheria	Influenza	Scarlet Fever	Measles (morbilli)	German Measles (rubella)	Whooping Cough	Chickenpox	Mumps	Pneumonia (acute lobar)	Meningitis (epidemic)	Poliomyelitis (epidemic)	Other Diseases (see Addenda)
THE STATE	269	126	201	54	3	105	197	1	360	40	39	11	1	2	297
Allen, except	0	0	0	2	0	2	0	0	0	0	0	0	0	0	1
Iola	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Anderson	0	1	0	1	0	1	0	0	3	0	0	0	0	0	0
Atchison, except	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Atchison city	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0
Barber	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
Barton, except	0	0	1	0	0	5	0	0	0	0	0	0	0	0	1
Great Bend	0	1	1	0	0	1	1	0	0	0	0	0	0	0	0
Bourbon, except	0	0	13	2	0	1	0	0	0	0	0	0	0	0	0
Fort Scott	0	4	3	0	0	0	0	0	1	0	0	0	0	0	6
Brown	1	0	0	1	0	0	0	0	1	0	1	0	0	0	0
Butler, except	1	3	3	0	0	0	3	0	0	0	3	0	0	0	1
Augusta	0	0	1	1	0	2	0	0	0	0	0	0	0	0	1
El Dorado	0	3	10	0	0	0	8	0	1	0	0	0	0	0	0
Chase	0	0	0	0	0	0	0	0	0	0	8	0	0	0	1
Chautauqua	1	5	1	0	0	0	1	0	0	0	0	0	0	0	1
Cherokee, except	3	5	3	2	0	1	1	0	0	0	0	0	0	0	3
Galena	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0
Cheyenne	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Clark*	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Clay	1	0	0	0	0	0	0	0	3	0	0	0	0	0	0
Cloud, except	1	1	0	0	0	1	0	0	2	0	0	0	0	0	2
Concordia	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0
Coffey	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
Comanche	0	3	0	0	0	0	0	0	6	0	0	0	0	0	0
Cowley, except	6	1	1	0	0	1	1	0	0	0	0	0	0	0	0
Arkansas City	0	0	1	0	0	1	0	0	7	0	0	0	0	0	3
Winfield	0	3	3	0	0	0	9	0	4	1	0	0	0	0	2
Crawford, except	6	4	3	2	0	0	4	0	6	0	0	1	0	0	0
Pittsburg	3	2	9	0	0	0	0	0	1	0	0	0	0	0	2
Decatur	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Dickinson	3	5	0	0	0	5	5	0	7	1	0	1	0	0	1
Doniphan	3	0	7	5	0	0	2	0	4	1	0	0	0	0	2
Douglas, except	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0
Lawrence	2	0	0	0	0	1	1	0	8	1	0	0	0	0	7
Edwards	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Elk	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ellis	0	1	0	1	0	0	1	0	0	0	0	0	0	0	1
Ellsworth	0	2	0	1	0	0	5	0	1	12	0	1	0	0	5
Finney	0	0	3	0	0	0	0	0	0	0	2	0	0	0	0
Ford, except	8	1	3	0	0	3	6	0	7	0	1	0	0	0	2
Dodge City	0	0	0	0	0	2	0	0	6	0	0	1	0	0	4
Franklin, except	27	2	1	0	0	3	0	0	0	0	0	0	0	0	0
Ottawa	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0
Geary, except	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Junction City	0	0	0	0	0	7	1	0	8	1	1	0	0	0	3
Gove*	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Graham	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grant	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gray	0	1	0	0	0	0	0	0	2	0	0	0	0	0	0
Greeley*	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Greenwood	1	0	0	0	0	2	0	0	1	0	0	0	0	0	1
Hamilton	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Harper	1	0	0	1	0	0	0	0	1	3	1	0	0	0	1
Harvey, except	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Newton	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0
Haskell	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Hodgeman	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Jackson	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0
Jefferson	1	0	1	0	0	0	0	0	0	0	1	0	0	0	0
Jewell	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0
Johnson	0	2	1	0	0	1	0	0	3	0	0	0	0	0	0
Kearny	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0
Kingman	0	0	11	0	0	0	1	0	3	2	0	1	0	0	0
Kiowa	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0
Labette, except	2	0	0	2	0	0	1	0	1	0	0	0	0	0	0
Parsons	42	0	18	2	0	0	1	0	6	0	0	0	0	0	22
Lane*	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Leavenwoth, except	2	0	1	0	0	1	1	0	0	0	0	0	0	0	0
Leavenworth city,	0	0	2	1	0	0	1	0	26	0	0	0	0	0	9

MORBIDITY REPORT FOR JULY, 1920.

COUNTIES AND CITIES.	Tuberculosis	Typhoid and Paratyphoid	Smallpox	Diphtheria	Influenza	Scarlet Fever	Measles (morbilli)	German Measles (rubella)	Whooping Cough	Chickenpox	Mumps	Pneumonia (acute lobar)	Meningitis (epidemic)	Poliomyelitis (epidemic)	Other Diseases (see Addenda)
Lincoln	1	0	0	2	0	0	0	0	3	0	0	0	0	0	1
Linn	0	0	6	3	0	0	1	0	1	0	0	0	0	0	2
Logan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lyon, except	2	1	0	0	0	1	0	0	0	0	0	0	0	0	0
Emporia	0	3	0	1	0	1	4	0	1	0	0	0	0	0	0
Marion	2	3	2	1	0	3	4	0	5	0	0	0	0	0	4
Marshall	0	1	2	0	0	2	3	0	1	0	0	0	0	0	5
McPherson	5	0	4	0	0	0	1	0	22	0	1	0	0	0	0
Meade	1	1	0	0	0	3	0	0	0	0	0	0	0	0	0
Miami	0	0	1	0	0	1	0	0	0	0	0	1	0	0	1
Mitchell	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0
Montgomery, except	3	2	5	2	0	2	3	0	1	1	0	0	0	0	0
Coffeyville	4	2	1	0	0	0	8	0	0	0	0	1	0	0	2
Independence	1	1	2	3	0	0	1	0	0	0	0	0	0	0	3
Morris	1	0	1	0	0	3	0	0	0	0	0	0	0	0	0
Morton	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nemaha	0	0	0	2	0	0	1	0	0	0	0	0	0	0	1
Neosho, except	0	3	1	1	0	0	5	0	0	0	0	0	0	0	0
Chanute	0	0	0	0	0	0	0	0	2	0	1	0	0	0	0
Ness	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Norton	4	0	0	0	0	0	9	0	3	0	0	0	0	0	0
Osage	0	0	2	0	0	0	0	0	1	2	0	0	0	0	1
Osborne	0	0	1	0	0	0	0	0	4	1	0	0	0	0	0
Ottawa	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
Pawnee	0	1	2	0	0	3	2	0	0	0	0	0	0	0	2
Phillips	4	0	0	0	0	0	3	0	0	0	0	0	0	0	0
Pottawatomie	2	0	1	1	0	0	0	0	0	0	0	0	0	0	0
Pratt	0	0	2	0	0	4	3	0	0	0	0	0	0	0	0
Rawlins	1	0	0	0	0	2	0	0	0	0	0	1	0	0	0
Reno, except	0	2	0	0	0	1	3	0	2	0	0	0	0	0	1
Hutchinson	5	5	0	0	0	1	2	0	6	0	0	0	0	0	8
Republic	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Rice	1	0	1	0	0	2	1	0	4	0	3	0	0	0	1
Riley, except	0	0	0	0	0	1	0	0	1	0	1	0	0	0	0
Manhattan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Rooks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rush	0	0	0	0	0	1	7	0	20	0	0	0	0	0	1
Russell	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Saline, except	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Salina	0	0	1	2	0	6	0	0	0	0	1	0	0	0	1
Scott	0	0	1	0	0	0	0	0	4	0	0	0	0	0	0
Sedgwick, except	0	0	1	0	0	0	1	0	9	0	0	0	0	0	0
Wichita	11	3	21	5	0	2	14	0	8	1	1	1	0	0	65
Seward	0	2	2	0	0	1	0	0	0	0	0	0	0	0	0
Shawnee, except	1	1	0	0	0	0	1	0	1	0	0	0	0	1	0
Topeka	28	16	2	1	0	4	24	0	73	11	0	0	0	0	36
Sheridan	1	0	0	0	0	1	4	0	4	0	0	0	0	0	0
Sherman	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Smith	0	1	4	0	0	0	0	0	5	0	0	0	0	0	0
Stafford	1	0	1	0	0	3	1	0	0	0	0	0	0	0	0
Stanton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stevens	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Sumner, except	3	2	3	1	0	4	1	0	0	0	0	1	0	0	0
Wellington	0	1	1	0	0	1	0	0	0	1	0	0	0	0	0
Thomas	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Trego	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wabaunsee	2	0	0	0	0	0	0	0	8	0	0	0	0	0	0
Wallace*	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Washington	0	1	7	0	0	0	0	0	0	0	0	0	0	0	0
Wichita	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wilson	2	1	0	1	0	1	24	0	0	0	9	0	0	0	0
Woodson	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Wyandotte, except	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0
Kansas City	25	11	4	3	0	3	5	0	32	2	1	0	0	0	60
Rosedale	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12

* No report.

Other communicable diseases: Cancer, 11; Chancroid, 1; Erysipelas, 6; Gonorrhœa, 164; Malaria, 5; Ophthalmia Neonatorum, 2; Pellagra, 2; Syphilis, 101; Tetanus, 3; Trachoma, 2.

What One Thousand Deaths from Tuberculosis Mean to the State.

T. D. Tuttle, Epidemiologist.

The following findings are based on a study of 1,000 deaths from tuberculosis in which complete report records are on file in the office of the State Board of Health. In this study the cases were classified as "married women," "married men," "single men," "single women, employed," "single women, unemployed," "school teachers," and "school children." No cases among children under school age were used. People living in the house with the patient are classified as "exposed persons" and are arranged according to age groups. The duration of the disease is that stated by the reporting physician (usually underestimated), and the period of disability is the "time patient has been unable to work," as stated in the procedure report. Though many of these patients were able to do very little work up to the time when they became totally disabled, I have assumed that the average would render one-half efficient service from the time of onset of the disease until the period of total disability.

In this study the result is set forth under three heads, namely: "The influence on society," "The financial loss," and "The health hazard."

As we have approximately 1,000 deaths from tuberculosis every year, the results of this study of 1,000 deaths fairly represent the annual social, economic and health loss in the state.

RESULTS FROM A SOCIAL STANDPOINT.

There were 380 deaths among married women, resulting in 336 widowers and leaving motherless 554 children under twenty years of age.

There were 228 deaths among married men, resulting in 218 widows and leaving fatherless 396 childen under twenty years of age.

There were 212 deaths among single men (employed), depriving 244 mothers and fathers of their aid in supporting the family.

There were 70 deaths among single women (employed), depriving 74 mothers and fathers of their aid in supporting the family.

The records do not show in how many instances these single men and women were the sole support of widowed mothers or of fatherless children.

THE FINANCIAL LOSS.

In estimating the financial loss I have placed the earning capacity of a woman at two dollars per day and that of a man at three dollars per day, both of which figures are far below the actual earning capacity under present conditions.

I find that among women the average partial disability is 26 months and the average total disability is 15 months. Among men the average partial disability is 28 months and the average total disability is 16 months. Therefore, we find the average earning capacity of the state reduced as follows:

450 women (partial disability) at $1 per day for 780 days	$351,000
450 women (total disability) at $2 per day for 450 days	405,000
440 men (partial disability) at $1.50 per day for 840 days	554,400
440 men (total disability) at $3 per day for 480 days	633,600
Total loss of earning capacity	$1,944,000

In addition, it must be remembered that 1,000 persons were totally disabled and became a charge on the head of the house or the community for an average period of fifteen months. The enormous loss of time, doctors' bills, drug bills, nurses' hire, etc., expended on the helpless people is beyond my power to estimate, but it would undoubtedly amount to a staggering figure.

THE HEALTH HAZARD.

There were 3,076 persons living in houses with tubercular-infected individuals for an average period of 40 months. During an average period of 25 months tubercular-infected individuals, capable of transmitting the disease, were walking our streets, frequenting our stores and public eating places, and more or less intimately associating with us in our work and play. Twenty of these were teachers, engaged in teaching in our schools and exposing the entire class. In addition there were 66 school children suffering from tuberculosis attending school for an average period of 25 months, constantly exposing to infection all the children with whom they associated directly or indirectly.

EVIDENCE OF LACK OF PRECAUTIONS.

We are justified in assuming that no precautions were taken before the patient knew that he was suffering from tuberculosis, and as this is a study of reported cases, we assume that the case was reported as soon as the diagnosis was made by the reporting physician. We find that 52.7 per cent of the cases died within less than one month after the case was reported, therefore no precautions whatever were taken in 527 cases for an average period of over 39 months; 23.5 per cent of the cases died within less than six months after the report of the case was filed, hence no precautions were taken by 235 people who lived for an average period of over 34 months. This leaves only 238 people who lived six months or more after the case was reported or diagnosed. In other words, out of 1,000 cases of tuberculosis in the state, 762 are taking no precautions whatever, while 238 of them are taking more or less precautions during a minor part of the infective period of the disease.

THE REMEDY.

Failure to take reasonable precaution is not due to obstinancy on the part of the average patient. As a rule (in 76 per cent of the cases), the patient does not know that he has tuberculosis until the disease is far advanced, until just a few weeks before he dies. This is due to the failure on the part of the physician to make a diagnosis in the early stages of the disease, or to the adherence on the part of some physicians, to that antiquated theory that a patient suffering from tuberculosis must not be told the nature of the disease.

When physicians will promptly diagnose and report all cases of incipient tuberculosis, a long step will have been made in the remedy of this situation. With knowledge of every case of tuberculosis in a community, a properly equipped health department can instruct the patient and members of the household in regard to preventive measures to be taken. As many families are so situated that proper care cannot be given to the consumptive at home—indeed it is only in very rare instances where such care can and will be given at home—the state should provide ample sanatorium facilities where the consumptive, both incipient and advanced cases, can be taken and properly cared for. Requirements for admission to such institution should be made as simple as possible. Instead of the patient or his friends having to unwind yards and yards of red tape in order to gain admission, the sole question should be whether the patient is willing to go; and where this willingness is not apparent, it should be cultivated and encouraged by the health departments and heartily supported by the community.

Physical and Mental Defects in Drafted Men.

The data upon which the survey made by C. B. Davenport and A. G. Love reported in *Good Health* for May, 1920, by Gertrude C. Davenport are based upon the statistics of the Surgeon General's Office, form 1010. It includes material from those men who were rejected by the local boards, together with about two-thirds of the others who reached the mobilization camps. The number of men furnishing the data is very large. It is estimated to be 2,743,922, and the authors express their findings in rates per 1,000.

Form 1010 shows that when all defects are recorded 469 men per 1,000 were found involved. Defects of the physical mechanism involving the hands, feet and bones and joints reached the high proportion of 216 per 1,000, or 39 per cent. The total number of persons so affected was 300,000, and in the greater majority of cases the foot was involved. Fifty per 1,000 had injured or deformed appendages and 40 per 1,000 hernia.

Defects of the sense organs reach 12 per cent of the total, and of this number one-half had some error of refraction either in one or both eyes. Diseases of the ear make up 25 per cent of the remaining sense-organ defects.

In the third place are pulmonary tuberculosis and venereal diseases, each with 1,170. Diseases of the heart reach 10 per cent; defects in metabolism, in stature, in chest measurement, along with goitre, cleft palate, spinal curvature, hare-lip, etc., were no doubt found in large numbers, but the rate is not given. Diseases of the nose and throat are recorded at 5 per cent.

Nervous and mental diseases range around 6 per cent, or 40,000 cases detected before enlistment, others being discovered after stress of training camp and battle activities had overbalanced a defective nervous system. The nervous and mental defects include feeble-mindedness, mental deficiency, paralysis, psychasthenia, constitutional psycopathic states, and neurasthenia. Individuals having these disturbances were commonly rejected.

The geographical distribution of defectives as plotted by the authors presents some interesting features. For instance, the states of Arizona, New Mexico, Colorado and California produced the greatest proportion of tuberculosis recruits. Oregon, Washington, the New England states and certain of the Southern states are next in importance. The reasons for the prevalence above normal for the whole country in these states is largely climatic.

The chart showing the distribution of venereal diseases is especially noteworthy. The rate including syphilis, chancroid, and gonorrhea, based on the examination of approximately 2,754,000 men, is 32 per 1,000; this means a venereal infection of masculine population of 3.2 per cent, in contradistinction to the 10 per cent of the propagandists. The chart shows the Southern states black, indicating an incidence of from 53 to 163.32 per 1,000; this includes the colored population and it is just those states where the negro is in large proportion that the rates are highest. The lowest are Utah, the Dakotas and Wisconsin, with an incidence of from 13.03 to 21 per 1,000 recruits.

Simple goiter ranges from 3.02 to 26.91 per 1,000 in the Northwestern states and in Wisconsin and Michigan, *i. e.*, the Great Lakes region. The same distribution holds for the exophthalmic type of goiter. Again the Great Lakes region is involved, as well as Oregon and Washington, with an incidence ranging from 4.51 to 9.43 per 1,000 men. It is stated that there is a racial distinction in the prevalence of goiter. The Scandinavian people and the Finns seemingly are predisposed. These are, of course, represented in comparatively large numbers in the affected region.

On comparing the urban and rural recruits it was found that the latter in general were fit for service and more free from physical defects. The defective rate was 528 per 1,000 for the country and 609 per 1,000 for the cities. Deformities, congenital anomalies, syphilis, goiter, tuberculosis and eye defects were commonly in excess in urban recruits, but counterbalanced to a certain extent by the mental deficiency, arthritis, ankylosis and gonorrhea among those from the country districts.

In the distribution of the defect rate according to states, Rhode Island leads with 802. It also stands either first or second in a series of specific defects. Vermont comes next, and Virginia is among the first six states in respect to twenty varieties of defects. *At the bottom of the list stands Kansas*, with a rate of 442 per 1,000. It is a part of a territory extending from South Dakota to Texas which shows a physical superiority in its population.—*Quarterly Bulletin Louisiana State Board of Health.*

Bubonic Plague.

It is a remarkable fact, confirmed by many observations, that many physicians who have devoted considerable labor to the study of a particular disease have themselves died of that disease. One of the most interesting examples is that of John Daniel Major, born August 16, 1634, in Breslau, a physician and naturalist of no mean ability. Bitten early by the wanderlust, he studied at Wittenburg, took courses at many of the schools in Germany, and finally went to Italy, where he received the degree of doctor of medicine at Padua in 1660. Returning to his own country, he resided for a short time in Silesia, and in 1661 married, at Wittenburg, Margaret Dorothy, a daughter of the celebrated Sennert.

The following year his young wife was stricken with plague and died after an illness of eight days. Distracted by his loss, Major wandered up and down Europe studying plague wherever he found it, in the hope that he might discover a cure for the disease which had bereaved him. Spain, Germany, France and Russia were visited by him. He settled in 1665 in Kiel, where he was made professor of botany and director of the botanical gardens. He made frequent voyages, however, always in quest of the remedy for plague. Finally, in 1693, he was called to Stockholm to treat the queen of Charles XI, then ill with plague. But before he could render her any service he contracted the disease and died on the third of August.

The bubonic plague of to-day is identical with the black death of the Middle Ages. Primarily a disease of rodents caused by a short, dumb-bell-shaped, microscopic vegetable, the pest bacillus, it occurs in man in three forms—the pneumonic, which has a death rate of almost 100 per cent; the septicæmic, which is nearly as fatal; and the bubonic, in which, even with the most modern methods of treatment, the mortality is about 50 per cent. It is a disease of commerce, spreading around the globe in the body of the ship-borne rat. It is estimated that every case of human plague costs the municipality in which it occurs at least $7,500. This does not take into account the enormous loss due to disastrous quarantines and the commercial paralysis which the fear of the disease so frequently produces.

The disease is now treated by a serum discovered through the genius of Yersin. This is used in much the same way as is diphtheria antitoxin.

Plague is transferred from the sick rodent to the well man by fleas. The sick rat has enormous numbers of plague bacilli in its blood. The blood is taken by the flea, which, leaving the sick rat, seeks refuge and sustenance on the body of a human being, to whom it transfers the infection.

Since plague is a disease of rodents, and since it is carried from sick rodents to well men by rodent fleas, safety from the disease lies in the exclusion of rodents—not only exclusion from the habitation of man, but also from the ports and cities of the world. Those who dwell in rat-proof surroundings take no plague. Not only should man dwell in rat-proof surroundings, but he should also live in rat-free surroundings. The day is past when the rodent served a useful purpose as the unpaid city scavenger. Rats will not come where there is no food for them. Municipal cleanliness may be regarded as a partial insurance against plague. The prayer that no plague come nigh our dwelling is best answered, however, by rat-proofing the habitations of man. Modern sanitary science has evolved a simple and efficient weapon against the pestilence which walketh in darkness and striketh at noonday, by the extermination of rats and mice.

Bat the rat!

Bubonic Plague Warning.

The following letter has been sent to all health officers in Kansas, and is self-explanatory:

AUGUST 18, 1920.

To the Health Officers of Kansas—Greeting:

The governor has issued the following proclamation:

"PROCLAMATION.

"At a conference of the State Health Officers with the Surgeon General of the United States Public Health Service, held at Galveston, Texas, August 3-4, there was general agreement expressed that this country is threatened with a visitation of bubonic plague. Human cases of plague have appeared in five of our coast cities, gradually spreading since the firse case was discovered in New Orleans last October. The disease is also widely prevalent in several Mexican cities.

"Bubonic plague is primarily a disease of rodents, especially of rats, thus effective measures of prevention or control of the disease must be directed against the rat.

"Moreover, the annual economic loss from rats and mice in the destruction of food for man and beast, the loss of young poultry and the damage to building material and clothing is so great as to challenge the active interest of every citizen of the state. The U. S. Public Health Service declares that in cities the rat population is at least equal to the human population and that in the agricultural sections the rat population is from four to ten times the human population. The annual upkeep per rodent, estimated on prices before the war, was two dollars per rat, which with present prices is at least four dollars per rat. Using these figures as a basis, a conservative estimate of the annual loss in Kansas from rats and mice is at least thirty million dollars. In view of this unprecedented waste and in view of the growing menace of bubonic plague, I, Henry Allen, governor of Kansas, call upon the people of Kansas to engage in a rat-extermination campaign, and especially invite the coöperation of municipal authorities, county commissioners, boards of health and chambers of commerce and allied commercial and civic organizations to join in an organized and united effort to rid each community of rats and mice.

"It is further suggested that the week beginning August 23 be set aside as a special week for rat extermination, to the end that the menace of malignant disease and preventable waste of food be minimized.

"Given under my hand and seal this 16th day of August, 1920.

HENRY J. ALLEN, *Governor.*"

The facts presented at the conference at Galveston indicate that the bubonic plague situation is a threatening one, and it behooves every community to organize a defensive warfare against rodents. The enormous annual economic loss caused from the depredation of rats and mice is sufficient cause, aside from the menace of plague and certain parasitic diseases conveyed by the rat, to warrant a vigorous extermination campaign against these destructive rodents.

I trust that you may, without unnecessary delay, present this matter to your county board of health or your city board of health, as the case may be, and organize the commercial and civic clubs of your community, including boy scouts, in a united and vigorous warfare that may be under way by the week beginning August 23.

A small bounty for rats and mice given by municipalities, commercial clubs or farmers' granges will enlist the active support of practically every boy in the community.

As health officer, insist that all rubbish and garbage be collected and burned or buried, that rat harborage be broken up; that rat- and mice-proof garbage cans be supplied and that every precaution possible be taken that will cut off the food supply which will break up these places of breeding and harborage, and that will assist destruction.

Where poison is used, greatest care should be taken that it is placed beyond the reach of children, domestic animals or chickens.

Finally, it should be constantly borne in mind that a successful rat- and mouse-extermination campaign rests primarily upon the fundamental principle that all food supplies for man and beast and every form of garbage must be securely protected and placed beyond the reach of these rodents.

Kindly advise this department the action you take in the matter.

Very truly yours,
S. J. Crumbine, M. D., *Secretary.*

Kansas Public Health Laboratory.

The following bulletins for the information of physicians will be found helpful and informing and are worthy of careful reading:

Kansas State Board of Health,
Public Health Laboratory,
Topeka, Kan.

In Coöperation with
The U. S. Public Health Service.

BULLETIN No. 1.

THE WASSERMANN REACTION.

The Public Health Laboratory is ready to receive specimens of blood for the Wassermann reaction. This service is free of cost to every physician in Kansas. You are urged to make use of it. If you will observe the following points it will help to make the service mutually satisfactory:

1. Use our standard containers for your specimens, because:
   You will avoid transgressing postal regulations.
   We will be more likely to receive a satisfactory specimen.

2. Fill out the request blank carefully. You are urged to give the patient's name in full. It will avoid confusion on your part and on ours. Your confidence will not be abused, any more than if you wrote the patient's name on his history at the hospital.

3. Place the request blank in the outside container so that it will not be smeared with blood.

4. Take your specimen carefully, maintaining aseptic technique throughout. (See Instruction Sheet No. A.) Fill the vial two-thirds full, and pack in cotton.

5. If more than one specimen is inclosed in a single container, be sure that each vial is identified. Mark with adhesive tape or gummed label bearing name.

6. Mail immediately. Avoid taking specimens on Friday or Saturday. Delay is responsible for many unsatisfactory specimens.

7. Specimens received in the forenoon of any day except Saturday and Sunday will be reported the following afternoon.

8. Put the proper amount of postage on the outside container.

9. If a fee is charged by the physician for taking the specimen, it should only be a nominal one, and the patient should know definitely that the charge is for taking the specimen and not for performing the test. This will avoid misunderstanding.

Kenneth F. Maxcy, M. D.,
Assistant Collaborating Epidemiologist, U. S. P. H. S.,
Director, Public Health Laboratory.

S. J. Crumbine, M. D.,
Secretary, State Board of Health,
Collaborating Epidemiologist, U. S. P. H. S.

KANSAS STATE BOARD OF HEALTH,
PUBLIC HEALTH LABORATORY,
TOPEKA, KAN.

In Coöperation with
The U. S. Public Health Service.

BULLETIN-No. 2.

INTERPRETATION OF THE WASSERMANN REACTION.

The laboratory has decided to adopt the policy of reporting results on sera submitted for the Wassermann test by three terms, viz.: "*Positive,*" "*Doubtful,*" and "*Negative.*"

A "positive" reaction is one in which there is complete or almost complete fixation. This is equivalent to a "4 plus" or "3 plus" reaction as formerly reported.

A "positive" reaction is presumptive evidence of syphilis. Together with a suggestive clinical history or physical findings, it constitutes conclusive evidence. There are exceedingly few exceptions to this statement.

False positive reactions may be obtained if the blood has been taken:

(*a*) Immediately after an anæsthetic;
(*b*) When the patient is jaundiced;
(*c*) During a malarial paroxysm;
(*d*) During scarlet fever;

or if the blood has been contaminated with certain microörganisms at the time of taking.

Less than 0.4 per cent of normal persons give a positive reaction.

A "negative" reaction denotes complete absence of fixation. This does *not* exclude syphilis. In clinically positive cases:

In the primary stage, 75 per cent are positive, 25 per cent are negative.
In the secondary stage, 95 per cent are positive, 5 per cent are negative.
In the tertiary stage, 85 per cent are positive, 15 per cent are negative.
In the latent syphilis, 50 per cent are positive, 50 per cent are negative.

A false negative reaction may be obtained if:

(*a*) The patient has ingested large amounts of alcohol.
(*b*) During a febrile disease.
(*c*) During pregnancy.

It must also be borne in mind that there is a normal variation in the amount of syphilitic "antibody" in the blood stream, so that an individual showing a negative one day may on the next day or the week following show weak fixation.

By the term "doubtful" reaction will be designated the intermediate reactions, the "one plus" and the "two plus" reactions as formerly reported. The word connotes that such reactions may or may not indicate syphilis. In the absence of a positive history or suggestive clinical findings, a "doubtful" reaction has no significance. In the *presence* of a suggestive history or clinical findings, it is presumptive evidence in favor of syphilis. In a treated case with a previous positive reaction, it indicates progress in the arrest of the infection.

The reputation of the Wassermann reaction depends on three factors—the serological technique, the serologist himself, and the *accuracy of the clinician* on whose diagnosis the results of the serologist are judged. We know that *all* these factors are fallible. It is often assumed that a test like the Wassermann reaction can be judged by the frequency with which it satisfies clinical diagnosis; but in general, clinical diagnosis is a comparative estimate of probabilities, and its nature is such that the ripe experience of years may be reversed by an accurate scientific method. This is clearly manifest when an analysis of Wassermann tests is made. The agreement with clinical demands is least when sera are sent by a number of clinicians of varied knowledge and experience to be tested, and when the accuracy of the diagnosis cannot be called in question. When, on the other hand, the diagnoses are made after careful consideration, and on the basis of a wide and special experience, and when the diagnoses, if necessary, are reconsidered, after further investigation of the case along the lines suggested by the serological result, it is found that the test possesses an unusually high degree of specificity.

The laboratory invites helpful criticism and comparison of its work with that of other reputable laboratories.

KENNETH F. MAXCY, M. D.,
Assistant Collaborating Epidemiologist, U. S. P. H. S.,
Director, Public Health Laboratory.

S. J. CRUMBINE, M. D.,
Secretary, State Board of Health,
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KANSAS STATE BOARD OF HEALTH,
PUBLIC HEALTH LABORATORY,
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BULLETIN No. 3.

THE DIAGNOSIS OF GONORRHEA.

The diagnosis of gonococcus infection is one that is of peculiar importance both to the individual and to the community. A wrong positive diagnosis may be the means of inflicting grave injury upon an individual or family; a wrong negative diagnosis is liable to injure the family of the individual and the community to an even greater extent. It behooves the physician to be just as certain of his diagnosis as it is possible to be, and to use every available means to establish his conclusion.

The new Public Health Laboratory desires to coöperate more fully with the physicians of Kansas in this matter. Bacteriological confirmation of the clinical diagnosis is frequently obtainable, and should always be sought.

The picture presented in films, made from the discharge in a *frank case of gonorrhea,* is characteristic as regards the intracellular position of the gonococci, their morphology and staining. It is as easy for the bacteriologist to make the diagnosis as it is the clinician.

In those cases that are *clinically doubtful or suspicious,* the bacteriologist can often render valuable aid. The finding of the typical, intracellular cocci will clinch the diagnosis.

In *chronically infected individuals,* the ones in whom perhaps we are most interested from the public health point of view, it is much more difficult and frequently impossible to demonstrate the organisms in smears, even after repeated attempts. Here we must depend upon the clinical diagnosis of the highly trained specialist. But in every case, *bacteriological confirmation should be sought.*

For this purpose, upon application, *the laboratory will supply a mailing case containing a few glass slides.* Smears should be taken with careful technique (according to Instruction Sheet B). Upon being submitted to the laboratory they will be stained according to the Gram method. *A very strict interpretation of what constitutes a positive slide will be adhered to.* Report will be made of the finding of gram negative intracellular diplococci resembling the gonococcus in morphology.

In interpreting the report, it must be borne in mind that *diagnosis cannot be made with certainty in all cases by bacteriological methods alone.* There still remain cases of latent gonorrhea, both in the male and in the female, which fail to show the organisms in smears. In this, as in any other infectious disease, bacteriological evidence cannot always replace clinical. It is an *adjunct,* the value of which is augmented to a remarkable degree when the diagnosis is entrusted to a thoroughly trained bacteriologist employing the best methods.

A smear positive for gonococcus is of real value. One negative smear or repeated negative smears do not rule out the disease, particularly in chronic cases.

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KANSAS STATE BOARD OF HEALTH,
PUBLIC HEALTH LABORATORY,
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INSTRUCTION SHEET No. B.

PREPARATION OF SPECIMENS FROM A CASE OF SUSPECTED GONORRHEA.

The laboratory will supply, upon request, a mailing case containing four glass slides, three sterile cotton swabs, and a request blank. Always make smears on glass slides while the pus is fresh. Never send it to the laboratory on swabs.

Fill out the request blank carefully. If the slides are to be taken from different localities, or from different persons, see that they are properly identified by gummed labels or strips of adhesive.

TECHNIC IN MALE. Three hours after the last urination, wipe or wash the meatus clean to avoid contaminating the specimen, squeeze the urethra so as to "milk" out the pus, collect on a sterile cotton swab, smear thinly and evenly on a clean glass slide by a *single* stroke across the surface; or collect directly on the slide and spread with the edge of another slide. Do *not* rub the swab back and forth or round and round. The tendency is to have these smears entirely too thick, making their examination difficult. They should be extremely thin. Make at least two smears from each case, dry in the air, place film sides together with fold of paper or rubber band between ends to prevent rubbing or rattling. *Never* pack smears from *different* cases together.

In chronic cases the discharge may be increased by stimulating foods and active exercises continued for a few days. The patient should be instructed to present himself upon arising in the morning. When procuring the specimen, cleanse the meatus, thoroughly massage the prostate and seminal vesicles with patient standing bent over, collect the resulting discharge and make smears as before.

TECHNIC IN FEMALE. With patient in dorsal recumbent position, (*a*) wipe secretions from meatus or urethra with dry gauze, "milk" urethra and collect discharge on sterile cotton swab, which may be inserted slightly into the meatus if necessary, and make two smears in the usual manner. (*b*) Next insert speculum, carefully wipe all secretions from the exposed cervix, insert sterile cotton swab into cervix to insure obtaining only the cervical discharges, rotate slowly two or three turns, withdraw and make two smears as before. (*c*) The contents of Bartholin's glands should be expressed and a smear made.

Label each slide with patient's name and source of discharge from which smear is made. *Do not submit smears from vagina, as the examination of such smears is seldom worth while.*

KANSAS PUBLIC HEALTH LABORATORY.

Report of Division of Water and Sewage.

June, July, 1920.

Albert H. Jewell, Chief.

I.

Permits Issued or Refused for Waterworks and Sewerage.

Place.	*Date.*	*Nature of improvement.*
Arcadia	June 21	Waterworks.
Arkansas City	June 9	Water improvements.
Axtell	June 7	Waterworks.
Colby	July 14	Sewer improvements.
El Dorado	July 12	Waterworks.
Emporia	July 31	Sewage disposal plant.
Florence	July 12	Water extensions.
Goodland	June 7	Waterworks.
Goodland	June 7	Sewers.
Haven	June 21	Waterworks.
La Cygne	June 22	Water purification.
Minneola	July 23	Waterworks.
Neodesha	June 14	Sewers.
Oakley	June 30	Water supply.
Oakley	July 29	Water pumping station improvements.
Topeka	June 22	Sewer extensions, district 50.
Topeka	July 7	Sewer extensions, district 51.

Plans or preliminary reports have been received or conferences have been held with municipal authorities for new work at the following places:

Abilene	Extensions to water supply.
Augusta	Extensions to water supply.
Bird City	New water supply.
Caney	Water filtration and softening plant.
Clay Center	Water filtration and softening plant.
Douglass	Extensions to water supply.
Galena	New water supply.
Greenleaf	Extensions to water supply.
Hillsboro	New water supply.
Independence	Sewer extensions.
Manhattan	Water softening plant.
Ottawa	Water purification plant.
Peabody	Extensions to water supply.
Rocky Ford Milling & Power Co.	New water supply.
Salina	Sewer extensions.
Sedan	Water purification plant.
Topeka	Extensions to water supply.
Wellsville	New water supply.
White Water	New water supply.
Osawatomie	Improvement to water supply.

Record of analyses made in Water and Sewage Laboratory at Lawrence during June and July, 1920.

Source of supply.	*Bact.*	*Chemical.*	*Miscel.*
City supply	893	67	....
Bottled water	13	1	....
Private supplies	56	2	....
Railroad supplies	23	....	....
Ice	72	....	....
Ice supply	10	....	....
Miscellaneous	18	19	....
Algæ	....	....	1
Chlorides	....	....	4
Totals	1,085	89	5—1,179

Licenses Issued.

Date.	*Place.*	*Person or firm, and purpose.*
July 30	Atchison	Crystal Ice Company. Manufactured ice.
June 7	Baldwin	Thudium & Cooper. Manufactured ice.
June 7	Caney	Caney Ice & Cold Storage Co. Manufactured ice.
June 28	Canton	Miller & Griswold. Manufactured ice.
July 30	Chapman	Mercantile Ice Company. Manufactured ice.
July 20	Columbus	Columbus Ice Company. Manufactured ice.
July 20	Council Grove	Morris County Light & Power Co. Manufactured ice.
June 7	Ellsworth	Weber Electric Power Company. Manufactured ice.
July 30	Eudora	Henry Hagenbuch & Son. Manufactured ice.
July 8	Frontenac	Menghini Brothers. Manufactured ice.
July 20	Garden City	Garden City Ice Company. Manufactured ice.
June 28	Harper	Crystal Ice Company. Manufactured ice.
June 7	Haven	Haven Electric Light & Ice Co. Manufactured ice.
June 7	Herington	Herington Ice Company. Manufactured ice.
July 20	Humboldt	Humboldt Ice Company. Manufactured ice.
June 7	Iola	Iola Ice, Cold Storage & Fuel Co. Manufactured ice.
July 30	Kansas City	Alpine Ice Company. Manufactured ice.
July 20	Kansas City	Crystal Springs Ice & Cold Storage Co. Manufactured ice.
July 30	Kansas City	Railway Ice Company (two plants). Manufactured ice.
June 28	La Harpe	La Harpe Ice Company. Manufactured ice.
July 8	Lamar, Colo.	Union Ice & Storage Co. Manufactured ice.
July 20	Larned	D. Holman & Son. Manufactured ice.
July 30	Leavenworth	D. S. Ryan. Manufactured ice.
June 28	Luray	Luray Ice Company. Manufactured ice.
July 20	Marysville	Marysville Ice & Cold Storage Co. Manufactured ice.
July 8	Minneapolis	Russell Trimble Ice Company. Manufactured ice.
June 18	Moundridge	Polar Ice Company. Manufactured ice.
June 7	Olathe	City Ice Company. Manufactured ice.
July 30	Pratt	Pratt Ice & Coal Co. Manufactured ice.
June 7	Vermillion	L. E. Barnes. Manufactured ice.
June 18	Valley Falls	Jefferson County Light & Power Co. Manufactured ice.
June 28	Wellsville	Wellsville Light & Power Co. Manufactured ice.
July 8	Dunlap	Farmers' Union Store. Natural ice.
June 18	Norcatur	Fred L. Auker. Natural ice.
June 7	Paradise	Paradise Meat Market. Natural ice.
June 18	Wakefield	Mat Schiltz. Natural ice.
July 20	White Cloud	C. H. Lupold & Co. Natural ice.
July 30	Salina	Salina Bottling Works. Bottled water.

Railroad Water Supplies.

July 26	Abilene	Santa Fe.	
July 6	Argentine	Santa Fe.	
July 6	Atchison	Santa Fe.	
July 6	Chanute	Santa Fe.	
July 26	Cherryvale	Santa Fe.	
July 6	Concordia	Santa Fe.	
July 26	Emporia	Santa Fe.	
July 26	Frontenac	Santa Fe.	Certificate refused.
July 26	Independence	Santa Fe.	
July 6	Leavenworth	Santa Fe.	
July 6	Little River	Santa Fe.	
July 6	McPherson	Santa Fe.	
July 1	McPherson	Union Pacific.	
July 6	Osage	Santa Fe.	
July 6	Ottawa	Santa Fe.	
July 6	Topeka	Santa Fe.	
July 6	Wichita	Santa Fe.	
July 6	Winfield	Santa Fe.	

Some Rules for Keeping Young.

1. Do not eat too much, especially of meat and of rich, highly seasoned foods.

2. Eat plenty of fruit and bulky or green vegetables.

3. Take daily exercise—not half heartedly. Get heated! Use your muscles!

4. Rest and relax. Few people know how really to relax. Study the cat and see how she gives herself up and lets go every muscle.

Children's Rights.

Childhood is endowed with certain inalienable rights, among which are:

1. The right to a *mother and a father,* both of whom shall be mentally, morally and physically capable of producing *normal* children.
2. The right to a *sound body* and growth-producing *food.*
3. The right to *play* and develop in proper happiness and freedom.
4. The right to be *loved* by someone who will try to understand.
5. The right to a *vocation.*

BULLETIN
OF THE
Kansas State Board of Health

Published Monthly at the Office of the Secretary of the Board, Topeka, Kan.

S. J. CRUMBINE, M. D., Editor.

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The lands are lit
With all the autumn blaze of golden rod;
And everywhere the purple asters nod,
And bend and wave and flit.

A rodent spared may mean a life ensnared.

Work freely done shall balance happiness fully enjoyed.—*Browning.*

"Both he that soweth and he that reapeth may rejoice together."

Fully nine-tenths the joy of a vacation is getting back home.

Rodents have carried the dreaded "black death" to every quarter of the globe. Bat the rat!

Get ready for the tuberculosis Christmas seal campaign and the Red Cross annual roll call.

Insure the people an adequate supply of pure water and watch the typhoid morbidity and mortality rates descend.

One hundred and twenty-seven deaths from whooping cough in Kansas in the first six months of 1920. Only twelve were over two years old. Watch the babies.

Many counties the past month have conducted enthusiastic rat-extermination and general clean-up campaigns. Has yours?

The great interest manifested by the daily crowds seeking examinations at the eugenics building at the state fair, Topeka, is a token that there will be "fitter families at future firesides."

Notice.

Send all specimens for Wassermann or diagnostic laboratory to the new Public Health Laboratory, Washburn College, Topeka, Kan.

Send specimens of water for analysis to Water and Sewage Laboratory, University of Kansas, Lawrence, Kan., in sterile containers secured from said Water and Sewage Laboratory.

MORBIDITY REPORT FOR AUGUST, 1920.

COUNTIES AND CITIES.	Tuberculosis....	Typhoid and Paratyphoid...	Smallpox........	Diphtheria.......	Influenza........	Scarlet Fever.....	Measles (morbilli)......	German Measles (rubella)......	Whooping Cough.	Chickenpox.....	Mumps..........	Pneumonia (acute lobar)........	Meningitis (epidemic).....	Poliomyelitis (epidemic).....	Other Diseases (see Addenda)..
THE STATE.........	188	193	95	95	6	187	55	7	179	13	8	12	2	2	340
Allen, except.......	3	1	0	0	0	1	0	0	0	0	0	2	0	0	1
Iola............	0	0	1	1	0	2	0	0	0	0	0	0	0	0	0
Anderson..........	0	1	1	3	0	6	0	0	0	0	0	0	0	0	0
Atchison, except....	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Atchison city....	0	2	0	0	1	0	1	0	0	0	0	0	0	0	0
Barber............	0	2	0	0	0	0	1	0	0	0	0	0	0	0	0
Barton, except.....	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0
Great Bend......	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Bourbon, except....	0	0	2	4	0	2	0	0	0	0	0	0	0	0	0
Fort Scott.......	2	0	0	2	0	0	0	0	0	0	0	0	0	0	5
Brown............	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0
Butler, except......	0	7	4	0	1	0	0	0	0	1	0	0	0	0	0
Augusta.........	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0
El Dorado.......	3	4	3	3	1	6	0	0	0	0	0	0	0	0	1
Chase............	0	2	0	0	0	2	0	0	0	0	2	0	0	0	1
Chautauqua.......	0	4	0	1	0	0	3	0	0	1	0	0	0	0	1
Cherokee, except...	1	13	0	2	0	0	0	0	0	0	0	0	0	0	6
Galena..........	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cheyenne..........	0	0	0	0	0	3	0	0	0	0	0	0	0	0	3
Clark............	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Clay.............	0	0	0	0	0	0	0	0	9	0	0	0	0	0	1
Cloud, except......	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Concordia.......	0	0	1	0	0	3	0	0	0	0	0	0	0	0	2
Coffey...........	0	1	1	0	0	0	0	0	0	1	0	0	0	0	0
Comanche.........	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Cowley, except.....	0	1	0	0	0	0	5	0	0	0	0	0	0	0	0
Arkansas City...	0	0	0	0	0	4	0	0	3	0	0	0	0	0	2
Winfield.........	0	0	0	0	0	1	2	0	3	0	0	0	0	0	0
Crawford, except...	0	2	1	3	0	0	2	0	0	0	0	0	0	0	1
Pittsburg........	0	0	4	1	0	3	3	0	2	0	0	0	0	0	2
Decatur..........	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dickinson.........	0	0	0	2	0	4	0	0	3	0	0	0	0	0	0
Doniphan.........	1	0	1	1	0	4	0	0	0	0	0	0	0	0	2
Douglas, except....	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0
Lawrence........	3	1	0	0	0	3	1	0	0	0	0	0	0	0	1
Edwards..........	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Elk..............	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ellis.............	0	0	0	5	0	1	0	0	0	0	0	0	0	0	4
Ellsworth.........	1	0	0	0	0	1	0	3	10	1	0	2	0	0	1
Finney............	0	1	0	0	0	0	0	0	4	0	2	0	0	0	0
Ford, except.......	0	2	5	0	0	8	0	0	3	0	0	0	0	0	0
Dodge City......	1	1	0	1	0	3	0	0	1	0	0	0	0	0	3
Franklin, except....	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0
Ottawa..........	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Geary, except......	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Junction City....	0	0	0	0	0	11	0	1	3	1	1	0	0	0	0
Gove*...........	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Graham...........	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grant.............	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gray..............	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0
Greeley*..........	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Greenwood........	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Hamilton..........	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0
Harper...........	0	3	2	0	0	1	0	0	2	0	0	0	0	0	1
Harvey, except.....	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Newton.........	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Haskell...........	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Hodgeman.........	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
Jackson..........	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Jefferson.........	1	3	0	2	0	0	0	0	0	0	0	0	0	0	0
Jewell............	1	20	0	0	0	0	0	0	0	0	0	0	0	0	1
Johnson..........	0	0	0	0	0	3	0	0	1	0	0	0	0	0	0
Kearny...........	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Kingman..........	0	3	3	2	0	1	0	0	3	1	0	0	0	0	0
Kiowa............	0	6	0	0	0	4	0	0	6	0	0	0	0	0	2
Labette, except....	15	2	0	7	0	0	0	0	1	0	0	0	0	0	14
Parsons.........	6	1	4	2	0	0	0	0	2	0	0	0	0	0	7
Lane..............	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Leavenworth, except	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Leavenworth city,	1	0	0	2	0	1	0	2	4	1	0	0	0	0	7

MORBIDITY REPORT FOR AUGUST, 1920.

COUNTIES AND CITIES.	Tuberculosis....	Typhoid and Paratyphoid...	Smallpox.......	Diphtheria.....	Influenza.......	Scarlet Fever.....	Measles (morbilli)......	German Measles (rubella).......	Whooping Cough.	Chickenpox.....	Mumps.........	Pneumonia (acute lobar)........	Meningitis (epidemic).....	Poliomyelitis (epidemic).....	Other Diseases (see Addenda)..
Lincoln...........	0	0	0	0	0	1	0	0	17	0	0	0	0	0	1
Linn............	0	1	2	1	0	3	0	0	1	0	0	0	0	0	3
Logan...........	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lyon, except.......	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Emporia........	10	3	0	0	0	0	0	0	0	0	0	0	0	0	1
Marion...........	0	3	1	1	0	7	3	0	5	0	0	0	1	0	20
Marshall..........	0	0	1	0	0	1	0	0	1	0	0	0	0	0	1
McPherson........	1	1	0	1	0	0	0	0	6	0	0	0	0	0	0
Meade............	2	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Miami............	0	1	4	0	0	0	0	0	0	0	0	0	0	0	4
Mitchell...........	0	1	0	1	0	0	0	0	3	0	0	0	0	0	0
Montgomery, except	2	7	2	0	0	1	0	0	0	0	0	0	0	0	3
Coffeyville.......	0	4	1	0	0	1	2	0	0	0	0	0	0	0	5
Independence....	2	0	0	13	0	2	1	0	1	1	0	2	0	0	1
Morris............	0	5	0	0	0	1	0	0	0	0	0	0	0	0	1
Morton...........	0	0	2	0	0	1	0	0	0	0	0	0	0	0	0
Nemaha..........	2	2	0	2	1	4	0	0	0	0	0	0	0	0	0
Neosho, except.....	17	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Chanute.........	17	1	0	1	0	0	0	0	0	0	0	0	0	0	6
Ness.............	1	0	2	0	0	0	0	0	0	0	0	0	0	0	1
Norton...........	3	0	0	0	0	3	0	0	0	0	0	0	0	0	0
Osage............	0	0	3	0	0	0	0	0	0	0	0	0	0	0	1
Osborne..........	0	0	0	0	0	1	0	0	7	0	0	0	0	0	1
Ottawa...........	0	0	1	0	0	1	0	0	1	0	0	0	0	0	0
Pawnee..........	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Phillips..........	0	0	0	1	0	4	0	0	0	0	0	0	0	0	1
Pottawatomie......	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pratt............	0	1	0	0	0	6	0	0	0	0	0	0	0	0	2
Rawlins..........	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0
Reno, except.......	0	3	0	0	0	7	0	0	0	0	0	0	0	1	0
Hutchinson......	1	7	1	1	0	0	0	0	0	0	0	0	0	0	8
Republic..........	5	0	1	0	0	0	0	0	0	0	0	0	0	0	1
Rice.............	0	1	1	0	0	1	0	0	1	0	0	0	0	0	0
Riley, except.......	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0
Manhattan......	2	1	0	0	0	1	0	0	1	0	0	0	0	0	2
Rooks............	0	0	5	0	0	1	0	0	0	0	0	0	0	0	0
Rush............	1	0	0	1	0	0	1	0	0	0	0	0	0	0	0
Russell...........	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Saline, except......	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Salina...........	2	3	3	3	0	3	5	0	0	1	0	0	1	0	0
Scott.............	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sedgwick, except...	0	5	0	0	0	2	0	0	1	0	0	0	0	0	3
Wichita.........	9	7	21	3	0	14	9	1	4	1	0	1	0	0	69
Seward...........	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0
Shawnee, except....	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0
Topeka.........	19	13	1	0	0	6	12	0	18	3	0	0	0	0	53
Sheridan..........	0	0	0	0	0	5	0	0	11	0	0	0	0	0	1
Sherman..........	0	0	2	1	0	2	0	0	0	0	0	0	0	0	0
Smith.............	0	0	5	0	0	0	0	0	2	0	0	0	0	0	1
Stafford..........	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stanton..........	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stevens..........	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Sumner, except.....	2	6	0	0	0	5	0	0	2	0	0	0	0	0	1
Wellington......	6	1	0	1	1	3	0	0	2	0	0	1	0	0	0
Thomas...........	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Trego*...........	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Wabaunsee........	1	1	0	0	0	3	0	0	9	0	0	0	0	0	0
Wallace*.........	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Washington........	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Wichita...........	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wilson............	1	10	0	0	0	1	2	0	0	0	0	0	0	1	0
Woodson..........	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wyandotte, except..	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Kansas City......	16	7	0	14	0	6	2	0	20	0	2	4	0	0	70
Rosedale........	3	0	0	0	0	0	0	0	0	0	0	0	0	0	7

* No report.

Other communicable diseases: Cancer, 26; chancroid, 5; dysentery, amœbic 1, bacillary 1; erysipelas, 3; gonorrhœa, 203; lethargic encephalitis, 2; malaria, 11; ophthalmia neonatorum, 1; syphilis, 75; tetanus, 2; trachoma, 10.

A Good Bargain in Tuberculosis.

One of the biggest problems of the health work of this country is tuberculosis. It is a special work and yet it is an everyday work. It requires and is worthy of constant vigilance, constant education, constant preaching of the laws of hygiene. Yet it usually needs to be stated in a way that will bring it to the special attention of the people in some rather striking manner.

The Kansas State Tuberculosis Association presents to us this year a very helpful solution of the problem of getting tuberculosis work started on a sound basis and insuring its maintenance thereafter.

It says, in effect, sell a certain number of Christmas seals and we will agree to put into your county our doctors and nurses. We will go through your county and make a tuberculosis survey. We will organize for you tuberculosis clinics. To these clinics your own doctors will bring their patients, but we will provide also the services of an expert consultant, our medical director and our nurses. The work will not stop there, for we will come back each month, or as often as seems necessary, to keep the clinics alive.

WILL SELL HEALTH BONDS.

A very attractive feature of this year's sale is the presentation of health bonds. These bonds are prepared in true bond style, with coupons which describe in detail the benefits offered. They are divided by the association into modern health crusade bonds, baby clinic bonds, and tuberculosis clinic bonds.

They add a very real and definite interest to the seal sale. Take, for example, a friend who is interested in schools. She is willing to buy a modern health crusade bond because the association agrees to supply forty children of her own district school with all the paraphernalia needed in putting on the modern health crusade in that school, including the pins and badges.

DIVIDE THE WORK.

Or, we will suppose that the commercial club of a small town desires a tuberculosis clinic right in their own town. Heretofore they have given their money for Christmas seals and have known it to be well invested, but have seen little returns for their own place. Now they club together and buy ten of the ten-dollar tuberculosis clinic bonds, and are thereby entitled to name the place at which the clinic shall be held.

This feature is a great encouragement to the county workers in a seal campaign. They are relieved of the necessity of raising their entire fund by the process of selling seals at one penny each. They can get a Parent-Teachers' Association to take one or more modern health crusade bonds, a woman's club to buy bonds and promote a baby clinic, a commercial club to invest in enough bonds for a tuberculosis clinic, and thus raise a goodly portion of the total county budget.

The work is being presented by K. Cecil Richmond, field representative of the Kansas State Tuberculosis Association, Topeka, Kan. Mr. Richmond has prepared a table showing various programs from which a county may select according to its needs and financial resources, and this table we are glad to present to you:

COUNTY PROGRAMS, 1921.

No. 1.—$3,000. Public Health Center.
Tuberculosis Survey, directed by expert consultants.
Monthly Tuberculosis Clinics.
Tuberculosis Nurses, one-fourth time.
Semimonthly Baby Clinics, nurse one-fourth time.
Baby Nursery.

No. 2.—$2,500. Public Health Center.
Tuberculosis Survey.
Monthly Tuberculosis Clinics, directed by experts.
Tuberculosis Nurse, one-fourth time.
Monthly Baby Clinics.
Nursery.

No. 3.—$2,000. Public Health Center.
Tuberculosis Survey.
Monthly Tuberculosis Clinics, directed by tuberculosis specialists.
Tuberculosis Nurse, one-fourth time.
Two Baby Clinics.

No. 4.—$2,000. Public Health Center.
Monthly Baby Clinics.
Expert Baby Nurse, one-fourth time.
Tuberculosis Survey.
Two Tuberculosis Clinics.

No. 5.—$1,500. Public Health Center.
Tuberculosis Survey.
Monthly Tuberculosis Clinics, under expert supervision.
Tuberculosis Nurse, one-fourth time.

No. 6.—$1,500. Public Health Center.
Semimonthly Baby Clinics.
Expert Baby Nurse, one-fourth time.
Baby Nursery.

No. 7.—$1,000. Monthly Baby Clinics.
Expert Baby Nurse, to direct work.

No. 8.—$1,000. Tuberculosis Survey.
Two Tuberculosis Clinics, and perhaps more.

No. 9.— $500. Big Baby Clinic; expert supervision.

No. 10.—————. Any county maintaining a satisfactory public-health program may secure a proportionate share of the seal sale proceeds, if one, or part of one, of the preceding programs is not desired. Thus, a county selling $2,000 worth of seals or health bonds receives 50 per cent of the proceeds; $2,500, 66⅔ per cent; $3,000, 70 per cent; and $3,500 and up, 75 per cent, after the seal sale expenses are paid. The State Tuberculosis Association uses the remaining funds for the extension of tuberculosis clinics and public health education.

Ford County Leads.

The honor of being the first county in Kansas to affiliate with the Kansas Public Health Association by organizing a county association rests with Ford county.

Under the guidance of Dr. F. M. Coffman, the wide-awake county health officer of Ford county, the public-spirited citizens of the county met and organized the Ford County Public Health Association in August.

Their general program is well defined, of course, but their specific actions will be determined from time to time as occasions appear. As questions involving health and sanitation arise in Ford county the value of such an organization as this will be readily apparent.

ONE MAN'S EXPERIENCE.

A short time ago a health officer wrote to the State Board of Health for advice. The city council had made a nice appropriation for health and sanitation, which looked very good, indeed, in its report. But when it came to the actual expenditure of the money appropriated, the council practically diverted a large proportion of the amount to other purposes. Weed cutting, for example, must be paid for out of this appropriation. The work was charged to the property owners at a good sum, but the charges assessed never came back to the health department. Repair of sewers was to be paid for out of "health and sanitation," but the work was not even to be directed by the health officer.

The doctor was indignant, and very properly so. What could he do? It was not much good for him to protest to the council. He was their health adviser, but he was also their hired man.

PUBLIC SENTIMENT IS STRONG BACKING.

Supposing, however, that this doctor had already gathered into a local public health society a number of good citizens. These would naturally be broad thinkers and persons of enough intelligence to see the great asset that public health is to every community. They would include a few prominent business men, one or two officials, possibly the superintendent of schools, the chief of police, some friends from the Parent-Teachers' Association, one or two members of the board of education, and quite likely some of the council members themselves.

The doctor asks this local health association to consider his problem. He does not say, "See what this council is doing to my work"; but rather, "Is the council doing what is best for the city?"

When the local health association presents its protest to the council it will meet consideration such as the doctor could not possibly expect alone, because the council realizes that the association speaks not for an individual but for the city.

IT HELPS CITY GOVERNMENT.

Supposing, on the other hand, that the council is meeting the necessity of getting an unwilling public to vote bonds for a new sewer or an extension of the water system. Its appeals to the people are turned off lightly as the mere chatter of politicians. "Wonder how much they will make off the contract?" asks some cheap-minded citizen.

But the Public Health Association goes to the voters as a disinterested body, making an appeal solely for the good of the city. It disarms at once the prejudice that always arises against any movement that might possibly be a cloak for promoting private interests, for the association is composed of well-known citizens who cannot be bought.

Furthermore, this local Public Health Association has resources that extend far beyond the home boundaries. It is a member of the state association, and through its membership in the state association also receives the benefit of the National Public Health Association.

FORWARD MOVEMENT IN HEALTH.

This is of inestimable benefit when it comes to the consideration of large movements for the public welfare, such as the protection of food supplies, arranging for milk standards, establishing a municipal water system and maintaining its purity. But it does not stop there. The relationship into which the local people are brought with other communities by means of the association serves to keep the home town up to a high mark. It serves to let the home folks know what other places are doing to insure the health of their school children, to keep down infant mortality, to promote the welfare of mothers, to abate nuisances and maintain the sanitation of the public thoroughfares.

NO MOSS-COVERED BUCKETS.

Left to itself, a community may move on year after year in the peaceful ruts in which its fathers traveled, scarcely realizing that it is being distanced in the progress of civilization until the young people, grown to manhood, go out to discover that the people of the home place have been sitting in the moss-covered seats of the unprogressive, and that their beloved home town is a "back number."

So we say to a town that desires normal growth, that desires to fill its place in the world in a sane, healthy manner, that desires to keep its young people firm in their faith that they are better off in their own progressive community than anywhere else, consolidate your health forces into a public health association and thus protect the health of your people and keep step in the march of progress.

The tuberculosis section of the Kansas Public Health Association has issued a pamphlet giving some directions for local organizing, and suggesting the sale of Christmas seals as a good plan to finance the initial stages of the local work.

There is so much merit in the pamphlet that we take pleasure in reproducing portions of it:

WHAT CAN BE DONE.

1. A local public health association can and should be formed.
2. Tuberculosis clinics may be established.
3. Baby clinics may be organized.
4. Health centers can be formed.
5. Educational campaigns against preventable disease and for public health work can be put "over the top."
6. Health surveys may be made to determine the prevalence of preventable disease.
7. Public health work can be promoted by:
    - Clean city campaigns.
    - Clean-up days.
    - Adequate garbage disposal.
    - Regular inspection of water and milk supplies.
    - Sanitary housing.
    - Better working conditions.
    - Public health education.

8. Secure a full-time county health officer.

9. Public health nurses may be obtained.

10. Disease can be controlled by public health education and by proper support of physicians and health authorities.

11. The community can be made healthy, preventable disease can be controlled, babies can be saved. (You would not watch your baby drown in a tub of water. Why allow one baby in every ten born to die before the age of one year?)

12. Organize for results. Provide a real local health association. Later the community, according to the laws of Kansas, may provide:

A county or city sanatorium.
Erect and maintain a county or city hospital.
Use public funds for public health nursing associations.
Use public funds for hospitals already established.
Free dental inspection for all school children.
Send tuberculosis patients to Norton sanatorium.
Aid indigent sick by using public funds.
Secure hospital care for indigent at University hospital.

HOW TO ORGANIZE A LOCAL PUBLIC HEALTH ASSOCIATION.

1. Talk personal health—talk public health—every opportunity.

2. Secure support of enthusiastic and influential citizens and representatives of various important community interests or organizations through personal solicitation.

3. Call a preliminary public meeting to present the community's need of health work and the solution—the formation of a local health association. Present local statistics for infant mortality, deaths from contagious diseases, probable amount of ill health, and the economic cost of disease.

4. Get a prominent citizen and an experienced public health worker to make short addresses.

5. Vote for the organization of a local public health association to systematize and to unite all public health work into one harmonious whole. (Many organizations are tackling the health situation, and their work often overlaps.) Consolidate!

6. Adopt a constitution, subject to change or amendment if desired later.

7. Elect a temporary board of directors.

8. Directors and leaders in the local central health organization movement should present the health needs to the various organizations in the community.

9. Local organizations, such as the American Legion, women's clubs, Chamber of Commerce, etc., should be asked to affiliate with the local public health association as a unit. That is, these organizations would become members of the local public health association and each would elect a member to represent it on the board of directors of the public health association.

10. Health is a common need that should unite all organizations—every possible organization then should be secured to make the local public health association a leader in the community.

11. Adopt a program; vote for a permanent tuberculosis clinic, baby clinic, or a health center; plan for the establishment of a local hospital or a nursing association to be supported by public funds; plan later for the establishment of a local hospital.

12. Prepare plans for financing the immediate program—that is, tuberculosis clinics, baby clinics or health centers—by Christmas-seal sale, returns from which can now be largely used in the home community. It takes work, pep and initative, but the goal is worth while. Save the babies and eliminate preventable diseases.

FINANCES.

Until public funds are available for public health work, the need and value of such work must be demonstrated and supported by other sources, perhaps the most satisfactory of which has been the Christmas-seal sale.

The Christmas-seal sale has financed public health and tuberculosis work since 1902. Although small in size and little in cost, the seals are doing wonderful work to seek and save those whose health hangs in the balance because of ill health and disease. Almost any community, if plans for a thorough seal sale are prepared early, can rapidly finance a good local program by the seal sale. If a local community forms a health association with a definite program, a large portion of the proceeds of the sale may be used locally.

Plans should be made to crystallize the sentiment of the local health association in favor of tuberculosis work or health centers. The members of the association, then, with a definite goal calling for a good budget can present the community with a program of service which will enable the association to put the seal sale "over the top"—to sell more seals than called for by the budget.

SEALS SAVE LIVES.

Write the field representative of the Kansas State Tuberculosis Association, K. Cecil Richmond, 602 Mills building, Topeka, for information as to financing the local health program with the small but mighty Christmas seals.

The Kansas Public Health Association.

The Kansas Public Health Association received its charter from the state in the month of July, 1920. It starts as the union of the Kansas Health Officers' Association, the Kansas State Tuberculosis Association and the Mental Hygiene Commission of Kansas. It provides for—

1. General public health section.
2. Health officers' section.
3. Public health nurses' section.
4. Tuberculosis section.
5. Sanitary engineers' section.

And will admit other suitable sections as they apply for membership. Its officers are:

President, Rev. Edmund Janes Kulp, D. D., Topeka.

Vice presidents, William Allen White, Emporia; Dr. S. J. Crumbine, Topeka.

Secretary, Dr. Charles H. Lerrigo, Topeka.

Treasurer, Dr. Earle G. Brown, Topeka.

Executive Council: William Allen White, Emporia; Dr. J. J. Entz, Marion; Dr. E. G. Brown, Topeka.

So much interest has been shown in the construction of this organization, and so many requests received for information that we take this opportunity to present its constitution and by-laws as adopted at the initial meeting:

Constitution and By-laws of the Kansas Public Health Association.

CONSTITUTION.

ARTICLE I.

The name of this association shall be the Kansas Public Health Association.

ARTICLE II.

The objects of this association are to unite all persons and societies engaged in the promotion of the work of public health in the state of Kansas in one administrative body, to the end that duplication of effort may be avoided, that effort expended may produce the fullest possible results and that the development of public health may progress in the greatest harmony and most effectively; to encourage and promote the organization of local public health societies in appropriate townships, municipalities, counties and districts, and to exercise general supervision over all extragovernmental public health work performed by this association and the societies which form its sections, conducted in the state of Kansas; to raise funds for the performance of such work by collecting membership fees and by other methods, and to supervise the expenditure of funds.

ARTICLE III.

Program of work. The program of work of this association shall be:

1. General public health education.
2. Securing of beneficial legislation in the interests of public health.
3. Encouragement of state-wide interest by the organization of appropriate townships, counties or districts into local public health societies, which shall be affiliated with the state association and have a voice in its government, and shall be governed by its decisions and follow its general program.
4. Special work under the designation of "sections," by societies formed for the study and prevention of certain definite diseases, for the introduction of school hygiene, for the encouragement of good housing, for the prevention of accidents, and any other agency that makes for better health and longer life.
5. Wherever work is conducted by this association it shall serve as many objects of public health as can be embraced consistently. All sections shall seek coöperation and all shall profit by any work performed.

ARTICLE IV.

The meetings of this association shall be held at such times and such places as may be directed under the by-laws.

ARTICLE V.

Amendment of constitution. Propositions to amend the constitution may be presented in writing at any meeting of the board of directors of the association. They shall then be referred to the board of directors for consideration and report. The board of directors shall report such proposition for amendment at the next meeting of the association when action may be taken: Provided, however, that no proposition for amendment shall be voted upon without at least thirty days' notice of the meeting at which it is to come up for action, which notice shall be sent to each member and shall set forth the proposed amendment in full, together with the section to be amended. An affirmative vote of two-thirds of the members present at such meeting of the association shall be required for adoption.

ARTICLE VI.

This association shall be chartered under the laws of the state of Kansas. The names and addresses of the applicants for charter are: ———.

BY-LAWS.

ARTICLE I.

The founders of this association shall consist of individuals and of societies having for their prime object the promotion of public health work in Kansas. Individuals may hold membership in this association in the general public health section. Organizations whose prime object is public health work may enter this association and retain their identity by becoming sections. They may conduct their own work and expend their funds according to the direction of the officers of their own section, provided that the plan and budget of the section be ratified by the executive council of this association.

The sections shall be:

1. General public health section.
2. Health officers' section.
3. Tuberculosis section.
4. Public health nurses' section.
5. Sanitary engineers' section.
6. Such other sections as may be admitted to membership.

ARTICLE II.

Voting representation. On all questions of general policies the voting representation of this association shall be determined on the basis of one vote for each paid-up member of the association present at the meeting and one vote for each director: Provided, that on matters that might involve a change in the plan and methods of work of any organized section of this association, the voting power shall rest with the section.

ARTICLE III.

The financial affairs of this association shall be conducted so far as it is possible by allowing self-government to the various sections. There shall be no restrictions placed on any section as to the raising of money by measures already well established before merging into the Kansas Public Health Association. For example, the State Tuberculosis Association may continue to conduct its annual seal sale, and the various societies that have charged membership fees continue to collect such fees from their members. Aside from these methods already well established, no financial campaign shall be undertaken by any of the individuals or societies that have become affiliated with this association without first receiving authority at a regular or called meeting of the executive council. The purpose of this article is to avoid multiplicity of demands upon the people of the state of Kansas for financial support of public health work.

ARTICLE IV.

The administration expenses of this association shall be borne by the organizations of which it is formed, being prorated on a basis governed by the annual budget of each section: Provided, that no section shall be charged with a sum in excess of two per cent of its budget. Individual members who are not members of any of its constituent organizations shall contribute a membership fee of $1 per annum.

ARTICLE V.

Board of directors. The board of directors shall consist of one or more members from each county having a local public health association, based on one director to represent an active local membership of 100 members, or any major fraction of 100. In addition to the members of the board elected from the local societies, each organized body joining in this association as a section shall be entitled to two members of the board of directors. Every member of the State Board of Health shall be a member, as also shall be the executive secretary and the heads of each of the divisions of the board. The board of directors shall actively direct all volunteer health work of the association that is not specifically performed by one of the organizations united in this association as sections. It shall make recommendations to the associations incorporated in reference to the better organization and promotion of all the phases of public health work with which they deal, and shall exercise general supervision over all extragovernmental public health work in the state of Kansas represented by the sections affiliated.

ARTICLE VI.

Election of officers. The board of directors shall elect annually from its own number a president, two vice presidents, a secretary and a treasurer, who shall be the officers of the association as well as of the board. The board of directors may from time to time elect from outside its number such honorary vice presidents of the association as it may deem proper.

ARTICLE VII.

The board of directors shall elect from its members an executive council of six members, two of whom shall be the president and secretary of the association, and in the hands of this council the administrative work of the association, including employment of personnel, adjustment of salaries, if any, and other matters of detail, shall rest between meetings. The secretary of the State Board of Health shall be *ex officio* a member of the council.

ARTICLE VIII.

A majority of the directors shall constitute a quorum for the transaction of business.

ARTICLE IX.

There shall be at least one stated annual meeting of the association at a time and place to be fixed by the board of directors. Other meetings may be called by the board at such times and places as it shall deem proper. The executive council shall issue a call for a special meeting for the consideration of special business whenever requested to do so by a petition signed by not less than one-tenth of the directors.

ARTICLE X.

Amendment of by-laws. The by-laws may be amended by a two-thirds vote of the members present at the annual or a special meeting of the association or of the board of directors: Provided, that no proposition for amendment shall be voted upon without at least twenty days' notice of the meeting of the association or of the board of directors at which it is to come up for action, which notice shall be sent to each member of the association or of the board of directors and shall set forth the proposed amendment in full, together with the section that it is proposed to amend.

ARTICLE XI.

This association seeks the coöperation of every organization in any way interested in health propaganda. Through its department of education it may furnish to clubs and other organized bodies a definite program of health work, and if desired will supervise the progress of such work.

ARTICLE XII.

Health committees. In communities where for any reason it is not found desirable to organize a local association any group of citizens may establish a "health committee." This committee may hold membership in the general health section through any one of its number. It shall be entitled to advice and support of the association in its enterprises and will act as the agent of the association in the community that it represents.

Division of Child Hygiene.

DR. FLORENCE B. SHERBON, Chief.

CHILD WELFARE ACTIVITIES IN KANSAS.

The public-health nurses have been doing valiant service in giving talks and demonstrations to teachers' institutes and in holding children's health conferences at county fairs. Both these activities are relatively new ventures in health education; both have met a hearty response.

On September 10 the Kansas women's committee on child welfare held its second state meeting at the Chamber of Commerce. The work of the state-wide child-welfare survey was reported and discussed. The interest was keen and the workers were unanimous in saying that the results are well worth while, and all seemed to see great possibilities for constructive work in their communities. Sixty-two counties are lined up for the survey and it has been completed in about six.

On September 11 the Kansas Children's Code Commission met at the Chamber of Commerce in an all-day session.

The seven drafting committees reported their programs for legislation under the following subjects: (1) Children in industry; (2) Education; (3 Health of children; (4) Protection of maternity; (5) Protection of adolescence; (6) Defective, dependent and delinquent children; (7) General interests of children.

The Code Commission is doing very serious work on its mammoth undertaking. Among the many suggestions made in these reports only a few may be mentioned here. Special interest seemed to center in the idea of Kansas having a child-research station similar to the famous Iowa research station, which is at present the only one in the world.

County welfare boards, in which all the welfare work of the county will be centralized under one trained social worker with a staff and executive board, will be another important recommendation.

The strengthening of the present marriage laws by requiring the publication of bans and physical examination will also be recommended.

Legislation hastening full-time county and city health service; physical inspection of school children, and the establishment of a children's hospital at Rosedale will be recommended by the committee on health of children.

The better regulation of commercial amusements, movie censorship, private trials for minor offenders, separation of delinquent from dependent children in detention homes, will be among the recommendations of the committee on protection of adolescence.

The committee on children in industry will recommend periodical physical examination of working children and employment supervision.

Revision of the present mother's pension law has been urged by the committee on defective, dependent and delinquent children, also by the child labor committee, the committee on protection of maternity, and the committee on adolescence.

Altogether the work of the Code Commission is one of the most tremendously important activities in the state at the present time.

Health work at the Kansas Free Fair. This was perhaps the "healthiest" fair ever held in Topeka. The Topeka Day Nursery Association conducted a supervised playground and checking station for small children.

The Shawnee county public health nurses, A. R. C., conducted a station for weighing and measuring and giving instruction to mothers. They performed the phenomenal feat of measuring and weighing 2,400 children during the fair.

The State Tuberculosis Association kept a clinic tent open, where literature was given out. Public health nurses and a physician were available for consultation.

The State Board of Health exhibit car "Warren" was open to the public and was in charge of two of the Board of Health nurses.

The unique health feature, however, was the Eugenics Building, in which was conducted the "Fitter Families Contest" for the governor's trophy.

A staff of eighteen physicians, specialists and nurses examined entire families, using a special form which required three hours per individual to complete. The object was to demonstrate the value of thorough periodical examination of normal people and also establish eugenic standards whereby family efficiency may be judged. Families and pairs to the number of eighty-seven adults and fifty-three children were examined. Each adult received a thorough laboratory examination, including a Wassermann. Not a person objected to the Wassermann. All were negative. A full report will be published later. It was the feeling of all concerned that a new project of scientific and eugenic value was launched in "Fitter Families for Future Firesides."

Exterminating Rats by Poison.

In exterminating rats, either by poisoning or by trapping, it is important to bear in mind that success depends largely on the degree to which the removal of other foods makes the poisoned bait or the bait in the traps attractive to the rat. A variety of poisons may be used, barium carbonate, phosphorus, arsenic, and others, but even with an efficient poison, failure often results through lack of attention to details.

HOW TO USE BARIUM CARBONATE.

I.—*Kind of bait.* Three or more kinds of bait should be used. Each must be mixed separately with barium carbonate. One kind of bait from each of the following classes should be used:

(1) Meat or other animal substance, such as Hamburg steak, sausage, canned salmon, eggs or oysters.

(2) Fresh fruit or vegetable food, such as cantaloupe, tomatoes, green corn, baked sweet potatoes, bananas, etc.

(3) Miscellaneous foods, milk or cheese, peanut butter, bread, cake, cereals (raw or cooked).

II.—*How to mix.* The barium carbonate must be thoroughly mixed with the bait, so that the rats cannot eat the smallest portion of the bait without getting some of the barium carbonate. In the case of such substances as Hamburg steak, cheese, etc., use one part of barium carbonate to four parts of bait. Mix thoroughly with a spoon. Substances which cannot be thoroughly mixed with the barium carbonate, as just described (for example, cantaloupe, tomatoes, etc.), should be cut into small pieces and thoroughly covered with the barium carbonate, and then worked in with a knife.

III.—*How to set poison.* The three kinds of bait, prepared as above, should be divided into small portions, about a teaspoonful each, and placed freely about premises, alternating baits 1, 2, 3. It should be set at short intervals, not over ten or fifteen feet. *Do not mix the different kinds of bait with each other.*

IV.—*General instructions.* The morning after baiting look for dead rats and remove them. Take up baits; examine them so as to see which have attracted most rats. If any kind of bait has not been touched, use a different bait instead of this. Fresh bait should be used each night.

V.—*How often to bait.* Bait each night, as long as rats continue to eat bait.

VI.—*Caution.* Keep fowls, dogs, cats, etc, away from bait.

Antidote. An emetic, followed by Rochelle or Epsom salts.

A Drug Store Poem.

Druggist Moser, of Dodge City, is a good friend to the public. He has on exhibition in his store a sweet little quatrain that is commended to all the public and every druggist:

We do not guarantee
Patent medicines.
If you need medical attention,
See your doctor!

Almost But Not Quite.

Christ Garber consumed three tablespoonfuls of Paris green last week and the Chippewa doctors nearly saved him from death by pumping the stuff out of his stomach, but the poison had done its deadly work and he died the following day.—*Bloomer* (*Miss.*) *Advance.*

A Child's Summary of Rules of Health.

[The following résumé of a forty-five-minute talk on health and hygiene, given in a schoolroom down in the mountains of North Carolina, was made by a child nine years of age, to take home to her mother. The child certainly caught the essential points.]

If ye wash yourself inside and out no pisin will stick to you and make you sick.

Your mouth was made to eat with and yer nose to breathe with. Ef ye don't do hit this a way ye might get a sickness.

Ef you haft to spit, kiver it up with dirt.

Ye needn't have varmints in yer hed ef ye don't want him. I fergit the name she give the stuff that will kill 'em, but if ye keep clean they won't be any.

Ef sores air made clean and kep clean ye won't git blood pisin.

Worms is dirt come to life in you, as should not be thar. Wash all garden stuff keerful and clean your spring.

Ef ye don't scour your teeth yer mouth might be a swill pail and ef waste is not got rid of ye might get a fever.

Ef ye keep yer finger nails clean ye can scratch yer hid without danger of pisin. And hit air not polite to hev dirty nails.

Ef ye have sore eyes, don't spread 'em among others. Be keerful not to use no one's basin or towel or handkerchiew.

Ef ye see a baby with sore eyes, tell a doctor. Little babies don't belong to have nothing the matter with 'em.

Ef you get hurt get fixed right away or tomorrer it will be a bigger hurt. A house afire is too late.

—*Journal American Medical Association.*

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OF THE
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S. J. CRUMBINE, M. D., Editor.

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Strive!

Health and cheerfulness make beauty.—*Cervantes.*

He who has not health has nothing.—*Rousseau.*

"The man who once so wisely said,
'Be sure you're right, then go ahead,'
Might well have added this, to wit:
'Be sure you're wrong before you quit.'"

Walk four miles a day and keep the doctor away.

Nobody ever gets beyond the necessity of obeying the ten commandments.—*Estey.*

Peace for humanity lies somewhere just beyond the gate of justice.

Those who obey the moral laws have the moral laws of the universe back of them.—*Estey.*

Perilous is the hour for any person who thinks he can trifle with the moral code.—*Ellis.*

The removal of adenoids from a dull child will close the mouth and open the mind.

The game of life is not to learn how to avoid the blows, but how to take them standing up.—*Estey.*

Give me intelligent motherhood and good prenatal conditions and I have no doubt of the future of this or any other nation.—*Rt. Hon. John Burns.*

MORBIDITY REPORT FOR SEPTEMBER, 1920.

COUNTIES AND CITIES.	Tuberculosis	Typhoid and Paratyphoid	Smallpox	Diphtheria	Influenza	Scarlet Fever	Measles (morbilli)	German Measles (rubella)	Whooping Cough	Chickenpox	Mumps	Pneumonia (acute, all forms)	Meningitis (epidemic)	Poliomyelitis (epidemic)	Other Diseases (see Addenda)
THE STATE	115	221	91	388	14	324	57	2	130	34	21	13	2	3	379
Allen, except	0	0	0	47	0	3	0	0	0	0	0	0	0	0	0
Iola	1	2	0	17	0	2	0	0	0	5	0	0	0	0	2
Anderson	0	0	0	3	0	2	0	0	0	0	0	0	0	0	0
Atchison, except	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Atchison city	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
Barber	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0
Barton, except	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0
Great Bend	0	3	1	2	0	2	0	0	0	0	0	0	0	0	0
Bourbon, except	0	1	0	1	0	2	0	0	0	0	0	0	0	0	0
Fort Scott	0	1	1	28	0	2	1	0	0	0	0	1	0	0	7
Brown	1	3	0	4	0	2	0	0	5	0	0	0	0	0	0
Butler, except	0	4	0	6	0	1	0	0	0	1	0	1	0	1	0
Augusta	0	0	4	1	0	0	0	0	1	0	0	0	0	0	1
El Dorado	2	12	2	9	0	7	0	0	0	0	1	0	0	0	3
Chase	0	4	0	0	0	1	0	0	4	1	0	0	0	0	1
Chautauqua	0	5	0	11	0	0	0	0	0	0	0	0	0	0	2
Cherokee, except	0	21	0	7	0	3	0	0	0	0	0	0	0	0	5
Galena	0	1	0	1	0	2	0	0	0	0	0	0	0	0	0
Cheyenne	0	0	0	0	1	1	0	0	0	0	0	2	0	0	1
Clark	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Clay	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Cloud, except	0	0	0	1	0	0	0	0	1	1	0	0	0	0	0
Concordia	0	0	0	0	0	1	0	0	1	0	0	1	0	0	1
Coffey	1	0	0	2	0	2	0	0	0	0	0	0	0	0	0
Comanche	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
Cowley, except	0	1	0	17	0	4	0	0	6	0	0	0	0	0	0
Arkansas City	0	3	0	5	0	13	0	0	6	0	0	1	0	0	5
Winfield	3	2	0	0	0	8	0	0	2	0	0	0	0	0	4
Crawford, except	2	3	0	16	1	2	0	0	0	0	1	0	0	0	2
Pittsburg	1	1	1	3	0	3	0	0	0	0	0	0	0	0	1
Decatur	2	3	0	0	0	1	0	0	0	1	0	1	0	0	1
Dickinson	0	3	2	2	0	11	6	0	0	3	0	0	0	0	0
Doniphan	0	2	0	0	0	0	0	0	0	0	0	0	0	0	6
Douglas, except	1	0	0	0	0	0	0	0	0	0	3	0	0	0	0
Lawrence	1	0	0	0	0	4	0	0	0	4	1	0	0	0	12
Edwards	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0
Elk	1	0	0	2	0	3	0	0	0	0	0	0	0	0	0
Ellis	1	0	1	0	0	1	0	0	0	0	0	0	0	0	1
Ellsworth	0	1	0	0	0	0	0	0	4	0	0	0	0	0	2
Finney	0	3	0	0	0	0	0	0	6	0	3	0	0	0	0
Ford, except	1	5	0	0	0	2	0	0	0	1	0	0	0	0	1
Dodge City	2	0	0	1	0	0	0	0	0	0	0	0	0	0	3
Franklin, except	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0
Ottawa	1	0	1	0	0	3	0	0	0	0	0	0	0	0	0
Geary, except	0	0	0	0	0	6	0	0	3	0	0	0	0	0	0
Junction City	1	2	0	1	0	3	0	0	0	1	0	1	0	0	3
Gove*	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Graham	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0
Grant*	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Gray	0	3	0	0	0	3	3	0	0	0	0	0	0	0	0
Greeley*	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Greenwood	0	0	0	1	4	2	0	0	0	0	0	0	0	0	1
Hamilton	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Harper	0	4	0	7	0	1	0	0	0	0	0	0	0	0	4
Harvey, except	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Newton	4	0	1	1	0	1	0	0	0	0	0	0	0	0	0
Haskell	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hodgeman	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jackson	0	2	0	2	0	0	0	0	1	0	0	0	0	0	0
Jefferson	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Jewell	0	2	2	0	0	2	0	0	0	0	0	0	0	0	0
Johnson	0	1	1	0	0	0	0	0	0	0	0	1	0	0	0
Kearny	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Kingman	1	2	2	1	0	0	0	0	0	0	0	0	0	0	2
Kiowa	0	1	0	0	0	4	0	0	0	0	2	0	0	0	0
Labette, except	0	0	0	6	0	1	0	0	0	0	0	0	0	0	20
Parsons	0	3	0	9	0	0	0	0	0	0	0	0	0	0	14
Lane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Leavenworth, except	0	1	0	1	0	1	0	0	0	0	3	0	0	0	0
Leavenworth city,	3	1	0	0	0	1	0	2	0	0	0	0	0	0	7

MORBIDITY REPORT FOR SEPTEMBER, 1920—Concluded.

COUNTIES AND CITIES.	Tuberculosis	Typhoid and Paratyphoid	Smallpox	Diphtheria	Influenza	Scarlet Fever	Measles (morbilli)	German Measles (rubella)	Whooping Cough	Chickenpox	Mumps	Pneumonia (acute, all forms)	Meningitis (epidemic)	Poliomyelitis (epidemic)	Other Diseases (see Addenda)
Lincoln	1	0	0	0	0	0	0	0	5	0	1	0	0	0	1
Linn	0	2	14	0	1	2	0	0	0	0	0	0	0	0	0
Logan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lyon, except	2	13	0	15	0	3	2	0	0	0	0	0	0	0	0
Emporia	2	2	0	0	0	2	12	0	0	0	0	0	0	2	0
Marion	4	2	0	0	0	13	0	0	2	1	0	0	0	0	11
Marshall	0	0	2	1	0	3	0	0	0	0	0	0	0	0	0
McPherson	0	1	0	2	0	0	0	0	0	0	0	0	0	0	2
Meade	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0
Miami	2	5	0	0	0	1	0	0	0	0	0	0	0	0	0
Mitchell	0	0	0	0	0	5	0	0	3	0	0	0	0	0	0
Montgomery, except	1	1	0	20	0	1	0	0	6	0	0	1	0	0	0
Coffeyville	0	4	1	2	0	2	0	0	1	0	0	0	1	0	2
Independence	0	0	0	34	0	2	0	0	0	0	0	0	0	0	4
Morris	0	3	1	1	0	2	0	0	0	0	0	0	0	0	0
Morton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nemaha	1	2	0	5	0	1	0	0	0	0	0	0	0	0	0
Neosho, except	1	1	1	2	0	6	0	0	0	0	0	0	0	0	0
Chanute	1	0	0	4	0	3	0	0	0	0	0	0	0	0	2
Ness	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0
Norton	2	0	0	0	0	1	0	0	4	0	0	0	0	0	0
Osage	0	2	10	0	0	0	0	0	0	1	0	0	0	0	0
Osborne	0	1	0	0	0	5	0	0	13	0	0	1	0	0	0
Ottawa	0	0	0	0	0	2	3	0	0	0	0	0	0	0	0
Pawnee	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Phillips	0	0	1	0	0	1	1	0	2	0	0	0	0	0	1
Pottawatomie	1	1	1	4	0	1	0	0	0	2	0	0	0	0	0
Pratt	1	2	0	0	0	15	0	0	11	0	0	0	0	0	1
Rawlins	0	0	1	0	0	3	0	0	0	0	0	0	0	0	0
Reno, except	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
Hutchinson	3	6	0	3	0	7	1	0	0	0	0	0	0	0	9
Republic	0	1	0	0	0	0	0	0	0	0	0	0	0	0	6
Rice	1	0	7	0	0	9	0	0	1	0	0	0	0	0	1
Riley, except	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Manhattan	1	1	0	0	0	1	0	0	0	0	0	0	0	0	2
Rooks	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0
Rush	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0
Russell	0	0	0	0	0	1	0	0	2	0	0	0	0	0	0
Saline, except	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Salina	0	1	0	3	1	9	0	0	0	0	0	0	1	0	0
Scott	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Sedgwick, except	0	3	1	0	1	1	0	0	0	0	0	0	0	0	1
Wichita	20	9	10	22	1	19	2	0	3	0	2	0	0	0	71
Seward	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Shawnee, except	0	2	1	0	0	2	1	0	0	0	0	0	0	0	1
Topeka	17	16	3	1	0	16	9	0	3	1	1	1	0	0	38
Sheridan	1	0	0	0	0	1	1	0	6	0	0	0	0	0	0
Sherman	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Smith	0	1	0	0	0	7	0	0	0	1	0	0	0	0	1
Stafford	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0
Stanton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stevens*	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sumner, except	5	11	0	1	1	2	1	0	9	0	0	0	0	0	3
Wellington	1	2	0	20	1	24	1	0	13	6	0	0	0	0	3
Thomas	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Trego*	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Wabaunsee	0	0	0	0	0	4	2	0	0	0	0	0	0	0	0
Wallace	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Washington	0	0	1	1	0	0	8	0	0	0	0	0	0	0	0
Wichita	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wilson	2	2	11	5	0	2	0	0	0	1	0	0	0	0	0
Woodson	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
Wyandotte, except	0	0	0	4	0	2	0	0	0	0	0	0	0	0	1
Kansas City	11	6	3	21	0	12	1	0	4	1	3	1	0	0	99
Rosedale	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

* No report.

Other communicable diseases: Cancer, 32; chancroid, 9; bacillary dysentary, 4; erysipelas, 4; gonorrhœa, 208; malaria, 11; ophthalmia neonatorum, 2; pellagra, 2; syphilis, 72; tetanus, 1; trachoma, 34.

Report of Vital Statistics Survey of Osage County.

Owing to the low birth rate of Osage county and also to the suspicion that certain doctors were not reporting their births, it was decided to make a brief survey of Osage county to discover as nearly as possible the actual condition of affairs. The trip was made by the registrar, Dr. C. H. Lerrigo, and L. P. Kistler, statistician, August 12, 1920.

Since Osage county adjoins Shawnee, we were able to secure permission of the auditor to engage an automobile for the day's service and make the journey by that means of transportation instead of by train, thereby enabling us to cover a great deal more of the territory to be surveyed.

We made our first stop at Scranton, reaching there about 8:30 in the morning. There we interviewed the wife of the local registrar, one doctor, a Methodist minister and a Catholic priest.

Here, also, we discovered that our plans for locating families to whom children had been recently born could not be carried out as easily as we had supposed. Preliminary to our visit we had gone through the newspapers of Osage county for a period of six months and had copied from them all reports of births made therein, checking these against births reported. We had kept a list of all for which we had no records. Very seldom was any address given beyond that of the town in which the newspaper was issued. We supposed that upon making inquiry at these towns we should readily be able to locate the family residences. One source of information would no doubt be the postmaster. We promptly learned, however, that the postmaster would not give addresses, and that in a comparatively small number of cases could they be secured from the newspaper office or the local merchants. It will thus be seen that after names are culled from the newspaper it may still be a very difficult matter to locate the parents concerned.

The doctor whom we saw at Scranton stated that he reported all of the births occurring in his practice, but that he tried to have as few as possible. He received only $10 for a case, and there were doctors in the neighborhood that did the work for $5. He thought that the reporting of births would be more readily done by doctors if the fee of 25 cents went to the doctor instead of the registrar.

We had two names to look up in this district. One of them was found at Bluetown, a mile from Scranton. The mother supposed that the case had been reported. The doctor in attendance left the state a few months ago. All of our efforts to locate the other case were in vain.

At Burlingame we found a new registrar, who is in the real-estate business there. He was of the opinion that most of the doctors reported their births, but had the bad habit of keeping the certificates until he called for them. He complained also of undertakers making interments before securing burial permits, but refused to lodge any specific complaint of such matters, as he was afraid of creating ill feeling with the local merchants.

We called on two doctors in Burlingame. One of them is a very progressive, up-to-date young man who has been in practice about ten years. He is probably a type of the very best class of country doctors, but from that doctor also we heard the plea that the fee should be paid to the physician, although he admitted that 25 cents would make no particular difference to him, and said that he rarely undertook a case of confinement for less than $25, although most of his competitors charged only $10. He admitted that he held his certificates until the end of the month, and promised to send them in promptly to the local registrar.

We ran into Osage City in the rain and stopped there for dinner. The registrar is an old man, rather feeble, but is no doubt very efficient in his capacity. We found, however, the usual failing—that he is afraid to criticise doctors or undertakers and inclined to go to a great deal of unnecessary trouble himself in telephoning them for certificates rather than to insist that they be sent to him as soon as issued.

We called upon four doctors at Osage City. The one who had the largest obstetrical practice was very confident that he knew all about his business and that his reports were made in 100 per cent of cases. He also was of the opinion that doctors should be given the fee for making reports. I might mention that these opinions were voluntary in every case, as we did not bring the subject up. Upon our checking our list of names against the books of this overconfident doctor, we discovered four cases in his practice that were unreported in the six months preceding, although we were quite convinced of his sincerity in saying that he supposed that a certificate had been issued for every case.

At Lyndon one of the doctors had just suffered the misfortune of the death of one of his children through an automobile accident. He was engrossed with the affairs of the funeral, so we did not call upon him. The other doctor, C. W. Beasly, had apparently reported all of his cases and was very helpful to us in giving information that helped us to locate some of the families on our list.

The registrar of Quenemo was not sure that all of the doctors reported births. He also was unwilling to make any complaints. We called upon two doctors at this place and found two unreported births by calling upon parents.

At Michigan Valley, a small town that has no resident doctor, we found three cases of births since January 1, 1920, that were still unreported. All of these births had occurred in the practice of Dr. George McClintock, of Overbrook. We had received complaints against Doctor McClintock through the registrar of Michigan Valley, and this was one of the reasons for our survey. The parents of these three children did not seem very much concerned about the negligence of the doctor. One of them, who was the local blacksmith, absolutely refused to sign the information blanks upon which we usually base prosecution. He informed Mr. Kistler that it was money in his pocket to keep quiet about the matter; that the doctor who attended took $5 less than he charges most patients, and also was able to throw him business. The other two parents signed the blanks, but possibly did not realize that they might be used as evidence in taking action against the doctor. We stopped at Doctor McClintock's office in Overbrook, but he was not in, and as it was already quite late we did not wait long for him.

From Overbrook we went on to Carbondale, where we saw only the local registrar, who assured us that births in his district were well reported.

After reaching the office I wrote to Doctor McClintock, telling him of the fact that we had discovered certain unreported births and that it was our purpose to make a report of the survey to the State Board of Health. I suggested to him that if he really desired to observe the requirements of the vital-statistics law he might send us a statement of all births occurring in his practice from January to June, 1920, in order that a check might be made to see if others had also been neglected. Up to date he has not given us any reply.

Summing up the results of the survey: We visited eight towns, calling upon the local registrar of each place but one; called upon the local doctors wherever they were at home, and also called upon a number of parents; securing on our trip six new certificates, and six more to be reported by doctors as soon as they secure the information. I was impressed by the fact that almost everywhere the doctors seem to feel that they have a grievance in the fact that the 25 cents is given to the registrar instead of to the doctor, although none of them would admit that the amount would make any material difference to them. In general it is safe to say that the doctors of Osage county are anxious to obey the law, although one or two of them have become a little slack in its observance. A notable exception is in the case of Doctor McClintock, which case is very far from being ended.

Parents did not, as a rule, appreciate the importance of birth registration. I do not think that one of those whom we saw felt any particular concern about the fact that his baby was unregistered or showed much more than a mild interest in having the registration made. Ministers and priests were reasonably well informed as to the importance of registration and will in most cases be willing to act as agents in spreading information among their people.

Doctors visited: Scranton, Dr. Leroy Hawkins; Burlingame, Dr. F. E. Schenck, Dr. C. W. Stahl; Osage City, Dr. J. J. Curphey, Dr. E. B. Packer, Dr. M. W. Barnes; Lyndon, Dr. C. W. Beasley; Quenemo, Dr. W. O. Poston (not in), Dr. E. Butler; Overbrook, Dr. George McClintock (not in).

Fortunately for us all there are a number of things we can do to have good health that don't cost money. Thanks to the Maker that fresh, cool, moving air is not bought by the quart. It costs nothing to walk and rest the mind in it, to breathe it deeply into the lungs and to sleep in it. It costs nothing to drink water freely and to eat slowly. It costs nothing to stand, walk and sit erect. It costs nothing to form regular daily habits. It costs practically nothing to keep the body clean, the teeth clean and to eat clean food.

What is a Typhoid Carrier?

Kansas Public Health Laboratory Bulletin No. 4.

When a person drinks water or milk or eats food that is contaminated with the "typhoid bacillus" it gains entrance to his intestinal tract. If it succeeds in making its way from the intestinal tract into the blood stream, it causes the disease "typhoid fever." During the disease it multiplies in enormous numbers and is given off in the discharges from the body. By using proper laboratory methods it is very easy to demonstrate this germ in the blood, in the urine and in the feces of a person sick with typhoid fever. There ensues a struggle between the body cells of the sick individual and the invading army of typhoid bacilli. If the struggle is successful, the enemy in the blood stream is killed off or driven out of the body and the individual recovers. For some time after the battle is over, however, typhoid bacilli are given off in the discharges, but usually within three months they entirely disappear.

In about three per cent of persons who have had typhoid fever the bacilli do not disappear from the discharges. They have been banished from the blood stream; the fever is gone, and the individual feels as well as ever, but the typhoid bacilli continue to live harmlessly in his intestinal tract or in the kidney. These persons constitute what are known as "typhoid carriers." The condition is not very rare. In the general population it has been found that three-tenths of one per cent of persons are typhoid carriers. Unknown to themselves, however, they are to cause about half of the cases of typhoid fever in the state.

Carriers do not constantly cause cases. They may go for years without causing a case. There is one well-known instance in which a carrier caused no known cases in 1909, 1910, or the period of 1914 to 1918, inclusive; yet in 1919 there were 29 cases on his milk route.

They may not cause a case for many years after they have been ill with typhoid fever. It is not unusual to find that the first known case arising from a carrier occurred thirty to forty years after his own illness.

Is there any cure? To this we must answer there is no certain cure. The typhoid bacillus usually lives in the gall bladder. Sometimes it is the cause of gall-bladder trouble, such as gall stones. In such cases the gall bladder has sometimes been removed, and with this removal the typhoid bacilli have apparently disappeared from the feces.

About five per cent of carriers give no history of having had typhoid fever. This may be due in some instances to the individual having had a very mild attack of typhoid, which was unrecognized. In other instances the disease may have been incorrectly diagnosed as malaria or bilious fever, etc. But there remain undoubted instances in which the individual has never had typhoid fever. He has drunk or eaten contaminated water or food, but has had sufficient natural resistance to overcome the typhoid bacilli. These have, however, persisted in his intestine and gall bladder, and he is just as dangerous to other persons as the carrier who has had the disease.

Finally, it must be said that the condition, so far as we know, is a permanent one: "Once a carrier, always a carrier."

How does the carrier cause cases of typhoid fever?

1. If he is not cleanly in his habits, if he gets the most minute amount of urine or feces on his hands, and subsequently handles food products, such as milk, butter, cheese, tomatoes, apples, which are eaten raw, he may be the source of many cases of typhoid in a community.

2. If his discharges are deposited upon the ground or into an insanitary privy, wells in the vicinity may be polluted; the germs may be washed into a near-by stream which is used lower down for drinking purposes; flies may carry typhoid bacilli to the food on the table of neighboring houses. In all of these ways cases of typhoid fever arise.

How can the carrier be prevented from causing cases of typhoid fever?

1. He must not be employed in any food industry, must not handle milk or dairy products, raw vegetables, raw fruits, or cook for other persons.

2. He must use a sanitary privy, flyproof, with a water-tight vault.

3. He must disinfect his discharges, preferably with a chloride-of-lime solution.

Chloride of lime or bleaching powder..........	1 lb.
Water	3 gal.

Costs three cents per gallon. Use a quart or more per day in the privy vault.

4. He must be scrupulously clean about his person. After every visit to the privy the hands should be scrubbed with warm water, soap and scrubbing brush. A disinfecting solution is not necessary.

At a modest estimate, typhoid carriers are responsible for one-fourth of the cases of typhoid fever in the rural communities of Kansas.

Will that case of typhoid fever you are treating become a typhoid carrier?

The laboratory will inform you!

Write for an outfit for stool culture!

Diphtheria.

PUBLIC HEALTH LABORATORY,
KANSAS STATE BOARD OF HEALTH,
TOPEKA, KANSAS.

In Coöperation with
The U. S. Public Health Service.

BULLETIN No. 5.

Reports from various parts of the state show that diphtheria is widespread in many sections. Clinically the cases are characterized by extreme mildness. Many of them present only the symptoms of a mild tonsilitis, and recover after a short illness. Others show a few patches on the tonsils, which quickly clear up, while others show the typical membrane of diphtheria and postdiphtheritic paralysis, and death has occurred in some instances.

Attention of physicians is drawn to the fact that this prevailing sore throat is diphtheria, and that it should be combated with the same intensity as the old, virulent diphtheria, which we knew in former days.

In many localities the danger of the situation has not been grasped until the disease has become widespread. You are urged to be on your guard and meet the first cases in your community properly.

This emphasizes the necessity of using the laboratory in all cases of tonsilitis. It is only by means of cultures that the true character of the disease can be revealed. Nothing is gained by contention of physicians on the basis of clinical impressions. The real character of the disease may be definitely established by the result of the throat culture. The laboratory is ready to coöperate with you in every way. Remember that a positive throat culture is confirmatory evidence of definite value, but a single negative culture does not necessarily exclude the disease. Where you obtain a negative culture and are still suspicious, persist in sending in swabs until you definitely establish whether the disease is diphtheria or not.

Urge the use of antitoxin, as if you were dealing with a virulent diphtheria. It can do no harm. On the other hand, some of the mild cases are resulting in unexpected fatality.

Enforce the quarantine regulations in every instance. Remember that this does not necessarily mean excluding the wage earner from his place of business, provided that the patient is so isolated that the wage earner does not come in contact with the patient or nurse. The quarantine should be controlled by the taking of throat cultures, at least two negatives on the patient and one negative on each of the other members of the family being required before it is lifted.

Report of Laboratory for August and September, 1920.

The following is a tabulation of the work of the Laboratory for the months of August and September:

	September.		*August.*		*Increase.*
1. Complement fixation test for syphilis:					
Blood specimens:					
Positive	59		81		...
Negative	420		336		...
Doubtful	23		22		...
Unsatisfactory	60	(10.67%)	38	(7.88%)	...
Totals	——	562	——	476	86
Spinal fluids:					
Positive	3		1		...
Negative	10		4		...
Doubtful	1		1		...
Totals	——	14	——	6	8
2. Examination of sputum for tuberculosis:					
Positive	29		17		...
Negative	36		110		...
Unsatisfactory	14		3		...
Totals	——	136	——	130	6
3. Examination of cultures for diphtheria:					
Positive	40		16		...
Negative	124		26		...
No growth	19		...		...
Totals	——	183	——	42	141
4. Examination of smears for gonococcus:					
From physician:					
Positive	7		7		...
Negative	60		14		...
Doubtful	2		...		...
Totals	——	69	——	21	48

From detention camp at Lansing:					
Positive	17		4		...
Negative	197		152		...
Doubtful	2		2		...
Totals	——	216	——	158	58
5. Widals examined for typhoid fever:					
Positive	28		47		...
Negative	36		30		...
Unsatisfactory	14		1		...
Totals	——	78	——	78	...
6. Stool cultures examined for typhoid fever:					
Positive	1		6		...
Negative	15		20		...
Totals	——	16	——	26	*10
7. Miscellaneous examinations:					
Urine culture: Negative		1		0	1
Urine examined for tuberculosis: Negative,		2		0	2
Blood smear for malaria	...		1		...
Positive	1		...		...
Negative	2		...		...
Totals	——	3	——	1	2
Blood smear differential count		2		1	1
Blood matching for transfusion		3		0	3
Nasal cultures for meningococcus: Negative,		4		0	4
Culture from abscess		1		0	1
Animal heads for rabies	...		3		..
Negative	1		...		.
Unfinished	1		...		..
Unsatisfactory	1		...		..
Totals	——	3	——	3	0
Darkfield examination: Positive		1		0	1
Total		1,294		966	

During the month of September four outbreaks of typhoid fever were investigated. In two of these the carrier was located. One outbreak of epidemic meningitis was investigated. A carrier was not found.

KENNETH F. MAXCY, M. D.,
Director of Laboratory.

Report of Division of Water and Sewage.

AUGUST, 1920.

ALBERT H. JEWELL, Chief.

I.

Permits Issued or Refused for Waterworks and Sewerage.

Date.	*Place.*	*Nature of improvement.*
Aug. 26....	Augusta	Water improvement.
Aug. 26....	Baxter Springs	Water improvement.
Aug. 30....	Englewood	New well.
Aug. 30....	Portis	Waterworks system.
Aug. 30....	Wichita	Old Mission mausoleum.

Plans or preliminary reports have been received or conferences have been held with municipal authorities for new work at the following places:

Abilene	Extensions to water supply.
Bird City	New water supply.
Caney	Water filtration and softening plant.
Clay Center	Water filtration and softening plant.
Douglass	Extensions to water supply.
Galena	New water supply.
Greenleaf	Extensions to water supply.

---

* Decrease.

UNIVERSITY OF ILL
DEC 15 1922

Hillsboro	New water supply.
Horton	Sewer extensions.
Independence	Sewer extensions.
Manhattan	Water softening plant.
Osawatomie	Improvement of water supply.
Ottawa	Water purification plant.
Peabody	Extensions to water supply.
Rocky Ford Milling & Power Co.	New water supply.
Salina	Sewer extensions.
Sedan	Water purification plant.
Topeka	Extensions to water supply.
Wellsville	New water supply.
White Water	New water supply.
Osawatomie	Extensions to sewerage system.

Record of analyses made in Water and Sewage Laboratory at Lawrence during August, 1920:

Source of supply.	*Bact.*	*Chemical.*	*Miscel.*
City supply	489	29	....
Bottled water	17	13	....
Private supplies	47	....	....
Railroad supplies	15	....	....
Ice	49	....	....
Ice supply	7	....	....
Miscellaneous	4	5	....
Chlorides	...	....	4
Totals	628	47	4—679

Licenses Issued.

Date.	*Place.*	*Person or firm, and purpose.*
Aug. 3	Abilene	Belle Springs Creamery Co. Manufactured ice.
Aug. 26	Ashland	Culp Bros. Manufactured ice.
Aug. 26	Burlington	Burlington Light, Heat & Power Co. Manufactured ice.
Aug. 26	Bushton	D. O. Huebner. Manufactured ice.
Aug. 26	Caldwell	Caldwell Crystal Ice Co. Manufactured ice.
Aug. 16	Chanute	Chanute Ice & Light Co. Manufactured ice.
Aug. 16	Chetopa	Chetopa Ice & Bottling Works. Manufactured ice.
Aug. 26	Douglass	Alvah Harris. Manufactured ice.
Aug. 26	El Dorado	El Dorado Elec. & Refrig. Co. Manufactured ice.
Aug. 26	Goodland	Goodland Ice & Coal Co. Manufactured ice.
Aug. 3	Hope	Hope Condensed Milk Co. Manufactured ice.
Aug. 16	Hutchinson	Carev Salt Co. Manufactured ice.
Aug. 8	Hutchinson	Hutchinson Ice Co. Manufactured ice.
Aug. 3	Independence	Crystal Ice & Fuel Co. Manufactured ice.
Aug. 16	Kiowa	Kiowa Ice & Storage Co. Manufactured ice.
Aug. 3	Leavenworth	Consumers Ice Co. Manufactured ice.
Aug. 16	Lincoln	J. C. Cooper. Manufactured ice.
Aug. 16	Lindsborg	Lindsborg Ice & Coal Co. Manufactured ice.
Aug. 16	Neodesha	Neodesha Crystal Ice Co. Manufactured ice.
Aug. 16	Osawatomie	Osawatomie Ice Co. Manufactured ice.
Aug. 26	Pittsburg	Hull & Dillon Packing Co. Manufactured ice.
Aug. 26	Sedan	Sedan Crystal Ice Co. Manufactured ice.
Aug. 8	Sharon Springs	E. J. Erickson. Manufactured ice.
Aug. 16	Topeka	Railways Ice Co. Manufactured ice.
Aug. 16	Topeka	Seymour Packing Co. Manufactured ice.
Aug. 16	Washington	Concordia Electric Light Co. Manufactured ice.
Aug. 26	Wellington	Wellington Ice & Cold Storage Co. Manufactured ice.
Aug. 26	Wichita	Crystal Ice & Fuel Co. Manufactured ice.
Aug. 16	Winfield	Winfield Ice & Cold Storage Co. Manufactured ice.
Aug. 3	Americus	S. E. Winters. Natural ice.
Aug. 28	Abilene	Abilena Company. Bottled water.
Aug. 12	Augusta	Augusta Ice, Fuel & Grain Co. Bottled water.
Aug. 12	Fort Scott	H. D. Jensen. Bottled water.
Aug. 14	Wichita	Distilled & Aërated Water Co. Bottled water.
Aug. 23	Wichita	Viola Springs Water Co. Bottled water.
Aug. 6	Wichita	Wichita Vinegar & Bottling Works. Bottled water.

Railway Water Supplies.

Aug. 10	Abilene	Union Pacific.
Aug. 27	Anthony	Santa Fe. Certificate refused.
Aug. 27	Arkansas City	Santa Fe.
Aug. 27	Arkansas City	Kansas Southwestern.
Aug. 27	Arkansas City	Missouri Pacific.
Aug. 10	Atchison	Chicago, Burlington & Quincy.
Aug. 10	Atchison	Missouri Pacific.
Aug. 10	Cherryvale	St. Louis & San Francisco.

Date.	*Place.*	*Person or firm, and purpose.*
Aug. 10....	Coffeyville	Santa Fe.
Aug. 10....	Coffeyville	Missouri Pacific.
Aug. 10....	Concordia	Chicago, Burlington & Quincy.
Aug. 10....	Concordia	Missouri Pacific.
Aug. 27....	Conway Springs..	Missouri Pacific.
Aug. 10....	Ellsworth	St. Louis & San Francisco.
Aug. 27....	Emporia	Santa Fe.
Aug. 27....	Englewood	Santa Fe. Private supply.
Aug. 27....	Great Bend	Santa Fe.
Aug. 27....	Greenleaf	Missouri Pacific.
Aug. 27....	Herington	Rock Island.
Aug. 10....	Highland	St. Joseph & Grand Island.
Aug. 10....	Highland	Union Pacific.
Aug. 27....	Hoisington	Missouri Pacific.
Aug. 27....	Hutchinson	Arkansas Valley Interurban.
Aug. 27....	Hutchinson	Santa Fe.
Aug. 10....	Independence ...	Missouri Pacific.
Aug. 10....	Junction City....	Missouri, Kansas & Texas.
Aug. 10....	Junction City....	Union Pacific.
Aug. 10....	Leavenworth	Rock Island.
Aug. 10....	Leavenworth	Missouri Pacific.
Aug. 10....	Leavenworth	Union Pacific.
Aug. 27....	Liberal	Rock Island. Private supply.
Aug. 27....	McCracken	Missouri Pacific.
Aug. 10....	Manhattan	Union Pacific.
Aug. 10....	Salina	Santa Fe.
Aug. 10....	Salina	Missouri Pacific.
Aug. 10....	Salina	Union Pacific.
Aug. 24....	Seneca	Kansas City Northwestern. **Certificate refused.**
Aug. 10....	Seneca	St. Joseph & Grand Island. **Certificate refused.**
Aug. 27....	Sharon Springs..	Union Pacific.
Aug. 10....	Topeka	Rock Island.
Aug. 10....	Topeka	Missouri Pacific.
Aug. 10....	Topeka	Union Pacific.
Aug. 27....	Wellington	Santa Fe.
Aug. 10....	Wichita	Arkansas Valley Interurban.
Aug. 10....	Wichita	Santa Fe. Private supply. **Certificate refused.**
Aug. 10....	Wichita	Santa Fe. City supply.
Aug. 12....	Wichita	Kansas City, Mexico & Orient. **Private supply. Certificate refused.**
Aug. 12....	Wichita	Kansas City, Mexico & Orient. **City supply.**
Aug. 10....	Wichita	Midland Valley. City supply.
Aug. 12....	Wichita	Midland Valley. Private supply. **Certificate refused.**
Aug. 10....	Wichita	Missouri Pacific.
Aug. 10....	Wichita	Rock Island.
Aug. 10....	Wichita	St. Louis & San Francisco.
Aug. 27....	Winfield	Santa Fe.

Report of Division of Water and Sewage.

SEPTEMBER, 1920.

ALBERT H. JEWELL, Chief.

I.

Permits Issued or Refused for Waterworks and Sewerage.

Date.	*Place.*	*Nature of improvement.*
Sept. 27....	Horton	Sewer extensions.
Sept. 29....	Peabody	Waterworks.
Sept. 29....	Portis	Waterworks system.
Sept. 29....	Stockton	Sanitary sewers.

Final Inspections on Completed Work.

Date.	*Place.*	*Nature of improvement.*
Sept. 11....	Burns	Waterworksk.
Sept. 10....	Cheney	Waterworks and sewer.
Sept. 23....	El Dorado	Waterworks extensions.
Sept. 28....	Elk City	Water filtration plant.
Sept. 11....	Potwin	Sewer system.

Plans or preliminary reports have been received or conferences have been held with municipal authorities for new work at the following places:

Abilene	Extensions to water supply.
Bird City	New water supply.
Caney	Water filtration and softening plant.
Clay Center	Water filtration and softening plant.
Douglass	Extensions to water supply.
Galena	New water supply.
Glasco	Sewer extensions.
Greenleaf	Extensions to water supply.
Hillsboro	New water supply.
Independence	Sewer extensions.
Manhattan	Water softening plant.
Osawatomie	Improvement of water supply.
Osawatomie	Extensions to sewer system.
Ottawa	Water purification plant.
Rocky Ford Milling & Power Co.	New water supply.
Salina	Sewer extensions.
Sedan	Water purification plant.
Stockton	Sanitary sewer system.
Topeka	Extensions to water supply.
Wellsville	New water supply.
White Water	New water supply.

Record of analyses made in Water and Sewage Laboratory at Lawrence, during September, 1920:

Source of supply.	*Bact.*	*Chemical.*	*Miscel.*
City supply	393	28	..
Bottled water	10	0	..
Private supplies	34	1	..
Railroad supplies	14	0	..
Ice	21	..	..
Ice supply	3	..	..
Miscellaneous	1	4	..
Chlorides	...	..	2
Sand	...	..	1
	476	33	3—512

Licenses Issued.

Date.	*Place.*	*Person or firm, and purpose.*
Sept. 2	Alma	Alma Light & Ice Co. Manufactured ice.
Sept. 2	Bonner Springs	Bonner Electric & Manufacturing Co. Manufactured ice.
Sept. 13	Conway Springs	Frantz Ice Co. Manufactured ice.
Sept. 2	Fort Scott	Fort Scott Ice Co. Manufactured ice.
Sept. 2	Fort Scott	O'Connor & Hamlin. Manufactured ice.
Sept. 22	Galena	Union Ice & Fuel Co. Manufactured ice.
Sept. 13	Haviland	J. W. McNutt. Manufactured ice.
Sept. 13	Hiawatha	Hiawatha Light, Power & Ice Co. Manufactured ice.
Sept. 2	Kingman	Kingman Ice & Creamery Co. Manufactured ice.
Sept. 2	McDonald	Victor Piedalue. Manufactured ice.
Sept. 22	Miltonvale	Farmers Meat Market. Manufactured ice.
Sept. 22	Mulvane	Mulvane Ice & Cold Storage Co. Manufactured ice.
Sept. 22	Oswego	Citizens Ice Co. Manufactured ice.
Sept. 22	Pittsburg	Standard Ice & Fuel Co. Manufactured ice.
Sept. 13	St. John	St. John Mills. Manufactured ice.
Sept. 15	Geuda Springs	Geuda Springs Health Res. Co. Bottled water.
Sept. 15	Hiawatha	Sycamore Mineral Springs Co. Bottled water.
Sept. 30	Portland, Maine	Hiram Ricker & Sons. Bottled water.

Railway Water Supplies.

Sept. 23	Newton	Arkansas Valley Interurban. City supply.
Sept. 14	Canton	Atchison, Topeka & Santa Fe. Private.
Sept. 14	Frontenac	Atchison, Topeka & Santa Fe. City supply.
Sept. 14	McPherson	Atchison, Topeka & Santa Fe. City supply.
Sept. 23	Newton	Atchison, Topeka & Santa Fe. City supply.
Sept. 14	Strong City	Atchison, Topeka & Santa Fe. City supply.
Sept. 23	Bonner Springs	Kansas City, Kaw Valley & Western. City supply.
Sept. 14	Pittsburg	Kansas City Southern. City supply.
Sept. 15	Downs	Missouri Pacific. City supply.
Sept. 14	McPherson	Missouri Pacific. City supply.
Sept. 14	Pittsburg	St. Louis & San Francisco. City supply.
Sept. 14	Ellis	Union Pacific. Private.

Certificates Refused.

Sept. 14	Colony	Atchison, Topeka & Santa Fe.	Private.
Sept. 15	Gridley	Atchison, Topeka & Santa Fe.	Private.
Sept. 23	Kiowa	Atchison, Topeka & Santa Fe.	City supply.
Sept. 14	Anthony	Kansas Southwestern.	City supply.
Sept. 14	McPherson	Union Pacific.	Private.

Termination of Cases Prosecuted for Violation of Food and Drugs Law and Regulations, June 1, 1920, to August 31, 1920.

DIVISION OF FOODS AND DRUGS.

Defendant, Town, Violation, Date of Termination, Amount of Fine and Costs.

Frank Hartig. Wolcott. Sale and offering for sale adulterated watered milk. June 17. $5; no costs.
J. W. Gormley. White Cloud. Sale of eggs unfit for food. June 21. $10 and costs.
Farmers Union. Vliets. Sale of eggs unfit for food. June 23. $10 and costs.
Jacobs & Son. Pfeiffer. Failure to candle eggs. June 24. $1 and costs.
Adam Wolf. Catherine. Failure to candle eggs. June 24. $1 and costs.
F. B. Brungardt. Victoria. Failure to candle eggs. June 24. $1 and costs.
A. Schumacher. Victoria. Failure to candle eggs. June 24. $1 and costs.
J. N. Dreiling. Victoria. Failure to candle eggs. June 24. $1 and costs.
John Quint. Victoria. Failure to candle eggs. June 24. $1 and costs.
J. S. Dreiling. Victoria. Failure to candle eggs. June 24. $1 and costs.
C. Schmitt & Son. Catherine. Failure to candle eggs. June 24. $1 and costs.
Chas. Weyer. Clyde. Sale of eggs unfit for food. June 26. $5 and costs.
M. Boogartt. Jewell City. Sale of eggs unfit for food. June 29. $10 and costs.
Farmers' Union. Price. Sale of eggs unfit for food. July 9. $10 and costs.
A. H. Nausbaum. Bern. Sale of eggs unfit for food. July 9. $10 and costs.
Ray Mickey. Morrill. Sale of eggs unfit for food. July 9. $10 and costs.
Boland Dry Goods Co. Olivet. Failure to candle eggs. July 13. $5 and $2 costs.
C. I. McGregor. Olivet. Sale of eggs unfit for food. July 13. $5 and $2 costs.
H. Behrens. Lebo. Sale of eggs unfit for food. July 14. $5; $2.25.
Fred L. Mizer. Athol. Sale of eggs unfit for food. July 14. $10 and costs.
J. E. Hamilton. Halls Summit. Sale of eggs unfit for food. July 19. $5 and costs.
W. C. Tuney. Burlingame. Failure to candle eggs. July 19. $10 and $1 costs.
Dye & George. Earlton. Sale of eggs unfit for food. July 22. $10; $11.85.
C. J. Hayes. Fontana. Failure to candle eggs. July 27. $10; $7.85.
P. B. Sumner. Rest. Failure to candle eggs. July 28. $10; $11.40.
R. M. Parks. Hiawatha. Sale of eggs unfit for food. July 28. $10 and costs.
B. Gulick, of Gulick Brothers. Caldwell. Sale of substandard ice cream. July 31. $5; $7.35.
Geo. Fiola. Kanona. Failure to candle eggs. August 2. $10 and costs.
R. V. Henry. Athol. Sale of eggs unfit for food. August 3. $10 and costs.
L. A. Sprague. Burdick. Failure to candle eggs. August 4. $10 and $7.50.
A. G. Morris. Hill City. Keeping for sale adulterated eggs. August 5. $10; no costs.
Barnes Poultry Co. Barnes. Sale of eggs unfit for food. August 5. $10 and costs.
A. G. Morris. Hill City. Keeping for sale adulterated eggs. August 5. $10; no costs.
R. E. Ryan. Wetmore. Sale of eggs unfit for food. August 6. $10 and costs.
A. C. Rorabaugh. Buffalo. Failure to candle eggs. August 7. $10 and costs.
Frank Small. Buffalo. Failure to candle eggs. August 7. $10 and costs.
H. C. Vance. Hoxie. Failure to candle eggs. August 7. $5; $2.25.
A. D. Simpson. Grinnell. Failure to candle eggs. August 9. $1; $2.25.
E. J. Peterson. Grinnell. Failure to candle eggs; first count. August 9. $1; $2.25.
E. J. Peterson. Grinnell. Failure to candle eggs; second count. August 9. $1; $2.25.
B. G. Rueschhoff. Grinnell. Sale of eggs unfit for food. August 9. $1.
Wm. Oatman. Seneca. Keeping insanitary meat market. August 12. $25 and costs.
Farmers Coöp. Merc. Russell. Sale of eggs unfit for food. August 12. $5; $3.50.
F. W. Lee. Luray. Sale of eggs unfit for food. August 12. $5; $3.50.
F. W. Lee. Luray. Failure to candle eggs. August 12. $5; $3.50.
Clint Goad. Waldo. Failure to candle eggs. August 12. $5; $3.50.
John J. Brown. Walker. Sale of eggs unfit for food. August 13. $1; 50 cents.
Walker Merc. Co. Walker. Failure to candle eggs. August 13. $1; 50 cents.
J. Morganstern. Galatia. Sale of eggs unfit for food. August 16. $5; $14.
Fred Childers. Ellinwood. Keeping for sale meat unfit for food and insanitary ice box. August 16. $30; $9.45.
J. S. Hamilton, manager. Argonia. Sale of eggs unfit for food; failure to candle eggs. August 19. $25; $7.35.
G. A. Smith. Chetopa. Sale of eggs unfit for food. August 19. $10; $7.50.
Knox Brothers. Chetopa. Sale of eggs unfit for food. August 19. $10; $7.50.

Defendant, Town, Violation, Date of Termination, Amount of Fine and Costs.

H. D. Shutter. Riverdale. Sale of eggs unfit for food and failure to candle eggs. August 19. $15; $6.60.

L. G. McChesney. Bogue. Failure to candle eggs. August 19. $5; $1.50.

H. D. Henderson. Bogue. Failure to candle eggs. August 19. $5; $1.50.

F. M. Gaskell. Riverdale. Sale of eggs unfit for food and failure to candle eggs. August 21. $10; $6.60.

Moline Commission Co., E. E. Sawyer, manager. Moline. Failure to candle eggs. August 24. $10; $7.50.

John Homer. Independence. Failure to candle eggs. August 26. $15; $6.50.

Jenkins Wholesale Bakery. Salina. Sale of short-weight, unlabeled bread. August 27. $1 and costs.

Gottschick Baking Co. Salina. Sale of short-weight, unlabeled bread. August 27. $1; $8.50.

J. E. Wilson, agent, U. S. Dairy, Joplin, Mo. Parsons. Sale of substandard ice cream. August 30. $35; $8.85.

Theodore Pappas. Parsons. Manufacturing substandard ice cream. August 30. $25; $6.35.

Wm. Schifferdecker, Pittsburg Ice Cream Co. Pittsburg. Manufacturing substandard ice cream. August 31. $50; $8.75.

First Regional All-American Health Conference in Washington in December.

The first of a series of regional health conferences authorized by the International Health Conference in Cannes is to be held in Washington, D. C., December 6 to 13. It will be devoted to a consideration of venereal diseases, which, according to conservative estimates, constitute one of the world's most terrible plagues.

The conference is being organized under the joint auspices of the United States Interdepartmental Social Hygiene Board, the United States Public Health Service, the American Red Cross, and the American Social Hygiene Association. Prof. William H. Welch, of Johns Hopkins, has consented to serve as president, and already assurances have been received that some of the foremost physicians and sociologists will participate. Prominent health officers and sociologists from all parts of North America and South America will attend.

The conference will review past experiences and existing knowledge as to the causes, treatment and prevention of venereal diseases, and will formulate recommendations relating to a practicable three-year program for each of the North and South American countries participating. In addition it will make suggestions for putting such programs into effect.

In speaking of the proposed conference, Surgeon General Hugh S. Cumming, of the United States Public Health Service, said:

"The United States is in the front rank of the countries which have organized against the great red plague, and a consideration of the various measures which have proved of value in different communities will undoubtedly contribute much to further progress in the countries represented at the conference. More than any other important communicable disease, the spread of the great red plague is inextricably bound up in a mass of social, economic, educational and recreational problems. The success thus far attending the campaign against the venereal diseases is due largely to the fact that this interrelation has been recognized and that the campaign has enlisted the coöperation not only of physicians and sanitarians, but of sociologists, judges, probation officers, educators, the clergy and good citizens generally."

> "Other republics have failed because the citizens gradually grew to consider the interests of the class against the whole; for, when such was the case, it mattered not whether the poor plundered the rich or the rich exploited the poor; in either case the end of the republic was at hand. We are resolute not to fall into such a pit. This great Republic of ours shall never become the government of a plutocracy and it shall never become the government of a mob."
>
> —*Theodore Roosevelt.*

BULLETIN
OF THE
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S. J. CRUMBINE, M. D., Editor.

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Play the game—but play it fair!

Have you bought your Christmas seals?

Don't forget—to wash your hands before eating.

Modern home sanitation is conditioned on modern plumbing.

As the windows go down, the death rate goes up.

Tuberculosis is still the "Captain of the Hosts of Death."

This is the season when all good people should cover the cough and smother the sneeze.

Why should Kansas people be interested in rural sanitation? Because everything that is vital to Kansas is conditioned on the health of the rural people, who constitute 65 per cent of the population.

Fatigue which is not recovered from after a night's rest is incompatible with the leading of a normal, efficient, wholesome and happy life. Insufficient and irregular sleep subtracts from one's vitality.

MORBIDITY REPORT FOR OCTOBER, 1920.

COUNTIES AND CITIES.	Tuberculosis	Typhoid and Paratyphoid	Smallpox	Diphtheria	Influenza	Scarlet Fever	Measles (morbilli)	German Measles (rubella)	Whooping Cough	Chickenpox	Mumps	Pneumonia (acute, all forms)	Meningitis (epidemic)	Poliomyelitis (epidemic)	Other Diseases (see Addenda)
THE STATE	207	155	144	1155	39	889	194	9	144	92	18	53	7	6	395
Allen, except	0	0	0	21	0	1	0	0	0	1	0	0	0	0	0
Iola	2	0	0	24	0	0	0	0	0	0	0	0	0	0	0
Anderson	2	0	1	17	0	4	1	0	0	0	0	0	0	0	0
Atchison, except	0	1	0	1	0	5	0	0	0	2	0	0	0	0	1
Atchison city	1	0	0	7	0	1	0	0	0	2	0	0	0	0	0
Barber	0	0	0	0	0	9	0	1	0	0	0	0	0	0	0
Barton, except	0	1	1	1	0	4	1	0	0	0	0	0	0	0	0
Great Bend	0	1	1	1	0	0	1	0	0	0	0	0	0	0	0
Bourbon, except	2	4	1	8	1	15	4	0	0	0	0	0	0	0	2
Fort Scott	0	0	2	73	0	0	0	0	0	0	0	0	0	0	3
Brown	4	1	2	6	0	7	0	0	0	0	1	0	0	0	3
Butler, except	1	0	2	28	1	7	0	0	0	0	1	1	0	0	1
Augusta	1	0	0	10	0	2	0	0	0	0	0	0	0	0	0
El Dorado	2	14	5	15	0	6	0	0	0	0	1	1	0	0	0
Chase	0	2	0	1	0	5	0	0	0	2	0	0	0	0	2
Chautauqua	0	3	0	51	0	1	0	0	1	0	0	0	0	0	0
Cherokee, except	6	5	0	45	0	10	0	0	0	0	0	1	0	0	3
Galena	2	1	0	0	0	1	0	0	0	0	0	0	0	0	1
Cheyenne	0	1	0	3	2	5	0	0	0	0	0	0	0	0	0
Clark	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
Clay	0	1	0	1	0	6	0	0	13	0	0	0	0	0	0
Cloud, except	0	0	0	2	0	1	0	0	0	0	0	0	0	0	0
Concordia	0	1	0	0	0	4	0	0	2	0	0	1	0	0	2
Coffey	6	9	0	0	0	6	0	0	0	0	0	0	0	0	0
Comanche	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
Cowley, except	0	0	0	11	0	7	0	0	2	3	0	1	0	0	2
Arkansas City	2	0	0	26	0	14	0	0	1	1	0	3	0	0	6
Winfield	2	0	0	2	0	34	0	0	0	0	1	0	0	0	2
Crawford, except	1	5	0	73	6	16	0	0	1	0	0	1	0	0	2
Pittsburg	1	3	2	16	0	9	0	0	0	0	0	0	0	0	2
Decatur	0	9	0	0	3	0	0	0	0	0	0	0	0	0	3
Dickinson	0	2	2	5	2	32	0	0	2	4	0	0	0	0	0
Doniphan	1	1	2	4	1	2	0	0	13	0	0	0	0	0	3
Douglas, except	1	0	0	0	0	1	0	2	0	0	0	0	0	0	0
Lawrence	0	0	0	2	0	7	0	0	0	1	0	0	0	0	14
Edwards	0	2	0	0	1	6	0	0	0	0	0	0	0	0	0
Elk	0	0	0	3	0	4	0	0	4	0	0	0	1	0	0
Ellis	0	0	0	3	0	5	7	0	0	0	0	1	0	0	0
Ellsworth	1	0	1	2	1	3	1	0	2	1	0	3	0	0	0
Finney	1	6	0	10	0	2	0	0	4	0	0	1	0	0	0
Ford, except	3	3	0	4	0	4	0	0	0	0	0	0	0	0	0
Dodge City	4	1	0	6	0	3	0	0	0	3	0	0	0	0	1
Franklin, except	0	1	2	0	0	1	0	0	0	0	0	0	0	0	0
Ottawa	1	4	11	1	0	2	0	0	0	2	0	0	0	0	0
Geary, except	0	1	1	0	0	3	5	0	0	0	0	0	0	0	0
Junction City	1	0	0	6	0	11	0	0	0	25	0	0	0	0	13
Gove*	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Graham	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Grant	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Gray	0	0	0	0	0	7	0	0	0	0	0	1	0	0	0
Greeley*	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Greenwood	1	2	0	2	0	8	1	0	0	0	0	0	0	0	0
Hamilton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Harper	0	2	7	1	0	4	0	0	0	0	0	0	0	0	1
Harvey, except	0	0	1	3	0	3	0	0	0	0	0	0	0	0	2
Newton	0	0	0	16	0	0	0	0	0	0	0	0	0	0	2
Haskell	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hodgeman	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Jackson	1	0	0	2	0	7	0	0	0	0	0	0	0	0	0
Jefferson	1	2	2	2	0	4	5	0	0	0	0	0	1	1	3
Jewell	3	0	1	1	0	0	0	0	1	0	0	0	0	0	0
Johnson	0	0	0	0	0	3	0	0	1	1	0	0	0	0	0
Kearny	0	1	0	0	0	0	0	0	0	0	4	0	0	0	1
Kingman	1	0	0	0	0	10	0	0	0	0	0	0	0	0	0
Kiowa	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0
Labette, except	3	1	0	56	0	6	0	0	0	0	0	1	0	0	10
Parsons	2	0	1	27	2	10	1	0	0	0	0	3	0	0	19
Lane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Leavenworth, except	0	0	0	3	0	1	0	0	0	0	0	0	0	0	0
Leavenworth city,	4	0	1	2	0	1	0	0	4	14	0	0	0	0	3

MORBIDITY REPORT FOR OCTOBER, 1920—Concluded.

COUNTIES AND CITIES.	Tuberculosis	Typhoid and Paratyphoid	Smallpox	Diphtheria	Influenza	Scarlet Fever	Measles (morbilli)	German Measles (rubella)	Whooping Cough	Chickenpox	Mumps	Pneumonia (acute, all forms)	Meningitis (epidemic)	Poliomyelitis (epidemic)	Other Diseases (see Addenda)
Lincoln	0	0	0	1	0	7	0	0	3	0	0	1	0	0	0
Linn	1	1	10	8	0	21	1	0	3	0	0	0	0	0	3
Logan	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0
Lyon, except	1	4	0	2	0	7	4	0	2	1	0	0	0	0	0
Emporia	13	2	1	6	0	13	19	0	0	0	1	0	0	0	0
Marion	3	2	1	12	0	23	0	0	3	4	0	0	0	0	12
Marshall	0	1	8	0	0	2	0	0	0	0	0	0	0	0	2
McPherson	2	6	7	5	0	3	0	0	1	0	0	0	0	0	0
Meade	0	0	0	0	0	16	0	0	0	0	0	0	0	0	0
Miami	5	2	0	11	0	2	0	0	0	0	0	0	0	0	0
Mitchell	0	0	14	0	0	7	0	0	0	0	0	1	0	0	0
Montgomery, except	7	1	0	62	0	5	0	0	1	0	0	2	0	0	1
Coffeyville	3	0	0	12	0	7	0	0	0	0	0	0	1	0	4
Independence	5	0	0	19	0	7	0	0	0	0	0	3	0	0	1
Morris	0	3	0	0	0	17	1	0	0	0	0	0	0	0	0
Morton	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0
Nemaha	0	2	0	14	0	8	0	0	0	0	0	1	0	0	0
Neosho, except	3	2	0	8	0	21	7	0	0	0	0	0	0	0	0
Chanute	3	0	0	11	0	8	0	0	0	0	0	1	0	0	4
Ness	0	0	0	1	0	8	0	0	0	0	0	0	0	0	0
Norton	9	0	0	0	0	1	0	0	4	0	0	0	0	0	0
Osage	0	1	12	0	0	10	0	0	0	4	1	0	0	0	0
Osborne	1	0	0	0	1	0	0	0	13	0	0	0	0	0	0
Ottawa	0	2	0	0	0	3	4	0	0	0	0	0	0	1	0
Pawnee	0	0	11	0	0	15	0	0	0	0	0	1	0	0	2
Phillips	0	0	3	0	0	10	0	0	0	5	0	0	0	0	0
Pottawatomie	2	1	0	4	0	5	0	0	0	0	0	0	0	0	0
Pratt	3	0	0	2	1	32	0	0	10	1	0	0	1	0	2
Rawlins	0	0	0	0	0	5	0	0	0	0	0	1	0	0	0
Reno, except	0	2	1	9	0	11	0	0	0	0	2	0	0	0	0
Hutchinson	3	10	0	27	1	15	0	0	0	0	1	0	1	0	24
Republic	0	3	0	0	0	2	0	0	0	0	0	0	0	0	1
Rice	1	0	1	8	0	0	0	0	9	1	0	1	0	0	2
Riley, except	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0
Manhattan	0	1	0	5	0	2	0	0	1	0	0	0	0	0	2
Rooks	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0
Rush	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0
Russell	0	0	1	0	0	2	0	0	3	3	0	0	0	0	0
Saline, except	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
Salina	0	1	1	5	1	8	0	0	0	0	0	0	0	0	2
Scott	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sedgwick, except	0	1	1	7	0	5	1	0	0	0	0	0	0	0	0
Wichita	12	5	9	74	1	48	0	0	2	2	3	1	0	1	59
Seward	1	0	0	0	0	6	0	0	0	0	0	0	0	0	0
Shawnee, except	1	0	0	1	0	13	37	0	3	3	0	0	0	0	6
Topeka	15	5	0	5	0	32	62	0	1	0	1	4	2	1	30
Sheridan*	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Sherman	0	0	2	0	1	5	0	0	0	0	0	0	0	0	0
Smith	0	0	0	1	0	4	0	4	0	1	0	0	0	2	0
Stafford	0	2	3	9	0	3	0	0	0	0	0	0	0	0	0
Stanton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Stevens*	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Sumner, except	3	1	0	23	0	23	0	0	7	1	0	0	0	0	1
Wellington	2	1	0	76	12	22	0	0	15	1	0	0	0	0	0
Thomas*	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Trego	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Wabaunsee	1	1	0	0	0	6	20	0	4	0	0	0	0	0	0
Wallace	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Washington	0	1	0	0	0	5	3	0	1	0	0	0	0	0	0
Wichita	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wilson	1	4	6	42	0	22	2	0	0	0	0	3	0	0	1
Woodson	2	0	0	4	1	17	0	0	1	0	0	0	0	0	0
Wyandotte, except	3	0	0	18	0	1	0	0	0	0	0	0	0	0	3
Kansas City	33	4	1	57	0	21	6	0	4	2	1	12	1	0	124
Rosedale	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0

* No report.

Other communicable diseases: Cancer, 34; chancroid, 13; amœbic dysentery, 1; erysipelas, 2; impetigo, 1; gonorrhœa, 207; lethargic encephalitis, 1; malaria, 1; ophthalmia neonatorum, 1; syphilis, 96; tetanus, 3; trachoma, 35.

Will it Pay to Continue the Fight?

Leaving morals, health and decency out of the question, will it pay financially to continue the fight on venereal diseases? Will money spent on measures aimed at their prevention and cure net a good return? Purely from a dollar and cents point of view, is a state justified in setting aside an adequate sum to be used in the campaign to free its citizens from these infections?

Let us see.

Business executives may usually be counted on as safe guides when it comes to spending money with a view of getting big returns. They are constantly on the alert to learn new methods of cutting down expense and increasing efficiency. At least one thing is certain. They take few chances. Before they invest they must first be convinced that a thing is good, and that in the end it will be a paying venture.

More than 5,000 of the largest industrial concerns in the country are to-day engaged in venereal-disease control work. Since they are convinced that money spent on curing and preventing these infections pays, it must be interesting to know what were the facts that made them see that they could not longer afford the money loss inflicted by venereal diseases.

According to the census reports there are in the United States approximately 10,148,000 men between the ages of 20 and 30 years. The draft found that 5.6 per cent of men between these ages are infected with a venereal disease. This means that 568,000 young men between 20 and 30 years are infected. But not all the men infected are within this age group. An analysis of the venereal disease cases reported in one of the states during 1919 showed that only half of those diseased were between the ages of 20 and 30 years. Upon this basis it may be assumed that the total number of men venereally diseased in the United States is not less than 1,136,000.

As to the number of women infected it was found in the analysis of this same state report that 73 per cent of the cases reported were men and 27 per cent women. Applying the ratio between men and women, there would be 420,000 infected women in the United States, making a total of 1,556,000 venereally-diseased persons.

The average loss of time for each man in the army who had a venereal disease was slightly more than twelve days per year. This rate is obtained from the surgeon general's report for 1919. In this report he says: "Venereal diseases were also of great importance in the army on account of the loss of time occasioned. The total time lost for officers and enlisted men, American and native troops, serving at home and abroad, amounted to 3,937,710 days; 10,788 men and officers were absent from duty each day of the year on account of this class of diseases."

Estimating that men between 20 and 50 years earn an average of $4 per day—a moderate figure at present prices of labor—and that men from 15 to 20 and over 50 years earn $3 per day, it is seen that the total earnings of the men in the United States who are infected with venereal disease should be about $4,500,000 per day. But if these diseases render a man ineffective twelve days of the year, they earn about $150,000 less per day, which is an annual loss of $54,000,000.

By a similar calculation and by assuming that women earn daily $1 less than men, the total loss in the earnings of women who are infected with venereal diseases is over $15,000,000 per year.

This makes venereal diseases cost this country in wages alone more than $69,000,000 a year.

And yet this amount represents only the value of time lost on account of these diseases. It does not include the loss they cause through inefficiency and decreased production.

One large industrial plant recently made a study of the output of its workers and found that those infected with venereal diseases were 33 per cent below normal in their production. They found also that 68 per cent of the workers on the noneffective list each day were there because of venereal diseases. A clinic for giving scientific treatment was established in the plant at a cost of $5,000. The company now estimates that the clinic saved the plant $150,000 a year in increased production, or 3,000 per cent on its investment.

Another manufacturing concern followed the advice of the United States public-health service and aided in installing a clinic for the free treatment of its employees for venereal diseases at a cost of between $5,000 and $6,000 for the first year. The plant had a pay roll during this period of $125,000. The president of the firm has informed the health service that as a result of the clinic treatment the labor efficiency of his plant improved 33⅓ per cent, which gave him a return of $40,000 from the investment in one year.

Among the other 5,000 plants that have found that money spent on eradicating these diseases is good business are the Westinghouse Electric and Manufacturing Company, East Pittsburgh, Pa.; General Electric Company, Schenectady, N. Y.; Atlas Portland Cement Company, New York City; Solvay Process Company, Syracuse, N. Y.; Phelps Dodge Corporation, Bisbee, Ariz.; Kelly Springfield Tire Company, Akron, Ohio; The United Fruit Company (operating a number of vessels), New Orleans; The DuPont de Nemours Company, at Hopewell, Va.; The Surpass Leather Company, Philadelphia; American Steel Foundries operating in nine cities and the Kelly Island Lime and Transport Company, Cleveland, Ohio.

A heavy loss that is borne not only by industry but also by the public is that caused by accidents due to venereal disease. One railroad attributes four wrecks on its line directly to syphilis. The engineers in each instance had paresis, a form of syphilis which incapacitated them at a crucial time and caused them to lose control of their trains? The loss in lives and property was great.

A large lumber company reports that two-thirds of the accidents at its various camps are traceable directly to venereal diseases. Many other large companies have recognized the dangers as well as the wastage occasioned by accidents due to these infections and are spending large sums of money in providing for their employees preventive measures in the way of education and treatment.

In 1918 there were 2,000,000 industrial accidents in the United States. When one considers that as many or more will occur this year and that a large number of these will be caused by syphilis, it should not take him long to see that money spent to prevent such disasters would not be wasted.

Another heavy expense is the extra compensation paid to employees by insurance carriers on account of delayed recoveries from accidents where syphilis and gonorrhea prolong the convalescence. A plant surgeon of a large steel company relates an instance in point:

The case was of a man who turned his ankle accidentally. He was sent to a hospital for an X-ray examination. The injury was diagnosed as a sprained ankle. The ordinary time for recovery would have been from four to six weeks, but owing to latent syphilis which this injury stirred up with resulting complications, the man was compensated for seven months. Instead of the insurance carrier paying $72.15, compensation for six weeks, it paid $336.

But no one must think that industrial concerns pay all that venereal diseases cost. The economic loss caused by them in the general population is estimated at $300,000,000, while the yearly cost of prostitution in this country is estimated at $628,750,000. This includes, in addition to the loss caused to industries, the care of the insane due to venereal diseases and their economic loss, the cost of blindness that is due to these infections, the treatment of new cases among men, the sum that is paid direct to prostitutes, not to mention the amount they cost through the courts, the police, and hospitals, jails, and clinics.

It is obvious who pays the bills. Whether the taxpayer believes that prostitution, the great source of venereal infection, is a necessary evil or not, a part of his money goes to pay the cost that it inflicts on his state, county, or town each year.

One city, with a population (1920) of 387,219, has recently looked into the amount it pays annually in taxes for supporting its syphilitic insane, and it found that for the past eight years it has been paying an average of $20,000 per year.

A state also recently looked into the annual cost of its syphilitic insane and found that it was paying more for their care and keeping than it was to prevent tuberculosis, cancer, typhoid fever and all other preventable diseases, including the venereal diseases.

That cities and states have been paying huge sums year in and year out for expenses inflicted by these diseases is beyond dispute. The question is, Are they going to continue paying them?

Medical science and experience have given the world a plan whereby prostitution and its resulting diseases may be reduced to a minimum. This program, that has proved successful wherever it has been given a fair trial, is now at work in every state in the Union, except one. Through an appropriation provided for in the Chamberlain-Kahn act of 1918, the Federal government matched dollar for dollar of the money appropriated by the states for this work, with the result that in connection with the state department of health in forty-seven states there has been established a bureau of venereal-disease control, with a Federal officer or someone approved by the Federal government in charge.

But the appropriation that made this nation-wide campaign possible was by act of Congress this year curtailed so that the states will receive in 1921 only a little more than half of what they received in 1918, 1919 and 1920.

But, in the light of what venereal diseases cost a state a year in dollars and cents, not taking into consideration the deaths they cause or the life-long injury they do the innocent, as well as the guilty, can it afford not to carry on the campaign? When success is merely a question of funds, can it afford not to make up the deficit of the Federal appropriation and insure the continuance of the work?

Why Tuberculous Persons Without Funds Should Not Leave Home.

(Reprinted from a leaflet of the Denver Anti-Tuberculosis Society.)

A few years ago the United States public-health service, which made an investigation here, estimated that at least 400 tuberculous persons without funds come to Denver every year, and that the number is increasing.

The mistaken idea that climate alone will cure tuberculosis brings us a large number of these people *without sufficient money for adequate treatment.* Many of them come here expecting to maintain themselves by doing light work. To find such work, however, or work of any kind for a person with active tuberculosis, is practically impossible. The demand is always many times greater than the supply.

There is no state or municipal sanatorium in Denver. Several private institutions care for patients at from $40 to $160 per month, with very few beds at the lower figure. The care of persons *without funds* is limited to the places listed below, which are constantly taxed to the utmost, and obliged to turn away many applicants.

1. There are two free Jewish sanatoria with a capacity of 150 beds each, which accept a certain proportion of gentiles. Patients must apply from their place of departure, and await notification before coming to Denver. The waiting lists are always long, and it is usually months before an applicant can be admitted.

2. The county hospital and the county poor farm have a combined capacity of 59 beds. Only those persons having at least one year's legal residence in Denver are eligible for admission. At the county hospital the cases accepted are chiefly the far advanced and the dying.

3. There is, besides, a small tent colony for indigent tuberculous men, located on the outskirts of the city and maintained by public subscription.

The tuberculous patient coming to Denver should have sufficient funds for at least two years' good care. A few weeks or months in a lodging house, or even in a sanatorium, seldom bring lasting benefit, and often are merely a waste of time and money. Plenty of good food, rest, fresh air and medical attention are absolutely necessary for recovery, and must be continued over a sufficient length of time to secure an arrest or a cure. A patient lacking funds must do without these essentials; and the resultant anxiety, homesickness, hopelessness, and desperate necessity of working before he is able, especially if he has a dependent family, usually lead to a breakdown far more serious than the original condition which brought him here.

Many authorities agree that a cure is facilitated by adding a favorable climate to the essentials mentioned above. The patient, however, who is unable to pay for food, rest and proper care in this climate, and can obtain them at home, has a better chance of recovery there.

If climate alone could save these sufferers, Denver would welcome them, not only for humanitarian reasons, but because of the debt she owes to the tuberculous who have come here with sufficient funds to regain their health, and who have helped to make her what she is. But for the best interests of those tuberculous who have no funds, their migration to the West should be checked. Too often they leave their best opportunities for care behind them, and, sacrificing their all, start out on the quest for health, which, as we know, in almost every instance ends in death.

A number of communities in different parts of the country are now making an earnest effort to control tuberculosis among the *indigent* and those *without sufficient funds.* It is to be hoped that more states will awaken to their individual responsibilities, and will build state sanatoria with capacity to care for *all their indigent* tuberculous, maintaining these patients not only long enough to arrest the progress of the disease, but also providing after-care in places where such patients could be protected from relapse while gradually taking up work again.

Will not the anti-tuberculosis societies and the boards of health throughout the country plan a definite program to retain their own indigent tuberculous, and persuade them to enter their own state sanatoria or to take proper treatment in their own homes?

Interpretation of Diphtheria Reports.

BULLETIN NO. 6.

The diphtheria outfit consists of the regulation mailing cases, containing two sterile swabs in a test tube—one swab for the throat and the other for the nose (to be used at the discretion of the physician). The method of sending in cultures on swabs has proved more satisfactory in public-health laboratory work than sending in cultures already planted on culture media.

As soon as the swab is received at the laboratory, it is inoculated upon Loeffler's serum culture media and incubated 16 to 24 hours. At the end of this time microscopic preparations are made and examined.

A *positive* report means that a bacillus similar in appearance to the *B. diphtheriæ* of Klebs and Loeffler has been found in the culture. Experience has shown that in the hands of a well-trained laboratory worker, when the swab has been taken from a clinical case or a contact with a clinical case, ninety-eight per cent of these diphtheria-like bacilli are virulent. On the other hand, when the swab has been taken from a normal person, not in contact with a case of diphtheria, a much smaller percentage of these diphtheria-like bacilli are really virulent and capable of causing disease. The differentiation between virulent and non-virulent or pseudo-diphtheria bacilli cannot be made by appearance under the microscope alone. Animal inoculation is necessary.

A *negative* report means that no diphtheria-like organisms were *found* in the culture. It does *not* mean that the patient has not diphtheria, if the clinical picture is suggestive. *A single negative report on a suspicious case should be disregarded. Treat the case as diphtheria until the subsequent cultures and course prove it not to be.* Some of the reasons for negative results are the following:

1. The patient may have used a disinfectant on his throat just before the swab was taken.
2. The physician did not carefully and thoroughly rub the swab over the inflamed surface or membrane and the adjacent diseased tissue, with good illumination of the patient's mouth so that he could see exactly what he was doing.
3. The swab was allowed to stand around on his desk for a day or two before it was mailed, or perhaps the postal service was at fault (as it so often is) and delivery was delayed so that the few diphtheria bacilli which were on the swab have died.
4. The diphtheria bacilli which were recovered on the swab were so few in number that the more rapidly-growing common mouth organisms overgrew them and they could not be found in the laboratory preparations.
5. With the best of technique, in a certain small percentage (perhaps 10 per cent) of clinically typical cases, no diphtheria bacilli are found on the first attempt. It may take repeated attempts to demonstrate them.
6. It is not unusual to get a negative *throat* swab when the disease is in the nose, or the larynx (membranous croup).

If the report is marked "No growth," it means that no bacteria grew on the culture. Reasons 1, 2, and 3 above are usually responsible for this. Another attempt should be made immediately.

In the case of "carriers" who do not clear up in a month or six weeks, the laboratory will do a virulence test upon request.

The laboratory will be glad to coöperate with public-health authorities in surveys of schools for "carriers."

If you are in a hurry for your report, send the culture "Special Delivery" and request telegraphic report.

S. J. Crumbine,
Secy. State Board of Health.

K. F. Maxcy,
Director of Laboratory.

It's Up to You.

There is nothing in life but the joy of the minute. There is nothing in love that we do not put in it. There is nothing can happen unless we begin it. There is nothing worth winning, but what we can win it.—*Helen Rowland in "Songs for Courage."*

Stay in Kansas.

Many years ago someone who had consumption dropped his work in a factory, left his worries behind him, got into a bed in the rear end of a comfortable wagon and rode in the open air all the way to the Southwest.

He got well.

Ever since then folks in advanced stages of consumption have got the habit of spending their last few dollars on a railroad ticket to the Southwest, expecting that then, when they got to that glorious air "out there," they could go right to work to earn a living and be well.

They mostly die.

You can get cured in your home state better than anywhere else in the world.

The cure comes from—

1. Freedom from work.
2. Freedom from worry.
3. Rest in the open air.
4. Good nourishing food.
5. Good cheer, happiness, the things that build up.

Colorado says: For the best interests of those tuberculous who have no funds, their migration to the West should be checked. Too often they leave their best opportunities for care behind them, and sacrificing their all, start out on the quest for health which, as we know, in almost every instance ends in death.

California says: The State Board of Health warns you because it wishes to spare you homesickness and suffering from financial strain.

The surgeon general, U. S. P. H. S., says: The belief which prevailed years ago in the specific virtues of certain climates, particularly that of the arid Southwest, is now known to have been wrong.

Kansas says: There is no better air than Kansas air. Stay here and be cured.

Early symptoms of tuberculosis:

Tired without cause.
Loss of weight.
Persistent cough.
Variable appetite.
Slight afternoon fever.

Tuberculosis is easily cured if you give heed to the early symptoms and begin treatment at once.

Treatment does not mean medicine: It means rest, fresh air, and good food, preferably taken in a sanatorium.

If you need advice write to the Kansas State Board of Health, Topeka, Kan.

Accomplishments of the Past and Promise for the Future.

SOME ACCOMPLISHMENTS.

It is doubtful if even the professional public-health worker always realizes fully how considerable have been the concrete accomplishments of sanitary science during the past two decades. It may contribute to a more confident and aggressive prosecution of the public-health campaign to review the statistical record as it concerns a few of the diseases which have lent themselves most readily to practical measures of control.

The death rate from typhoid fever in the registration area has been reduced from 35.9 per 100,000 to 13.4 per 100,000 in 1917; the death rate from diphtheria and croup has been reduced from 43.3 per 100,000 in 1900 to 16.5 in 1917; the death rate from diarrhea and enteritis has been reduced from 133.2 in 1900 to 64.0 in 1917; while the death rate from tuberculosis has fallen in the corresponding period from 201.9 to 128.9.

We have thus a reduction, in less than twenty years, of more than 22 points per 100,000 for typhoid fever, of more than 26 points for diphtheria, of more than 69 points for diarrhea and of 73 points for tuberculosis—a total of 190 points in all. This means a saving of approximately 200,000 lives a year in the United States as a whole.

In other words, the reduction in these four diseases is saving to this nation every year more lives than were lost by our expeditionary forces in all the battles of the late war.

PROMISE FOR THE FUTURE.

The prospects for the future are so bright as to warrant a confident hope of even greater triumphs than have been won in the past. The causes of infant mortality which operate before birth, at birth and during the first month of life are only just beginning to be attacked by prenatal, medical and nursing care. The problems of nutrition are for the first time being dealt with in definite and organized fashion. The campaign against tuberculosis promises to take on new life and vigor. The campaign against venereal disease has only been initiated on any broad and effective scale during the past two years. Malaria and hookworm disease have been proved to be definitely controllable, but they have been actually controlled only in restricted areas. Diphtheria antitoxin has not yet accomplished the results which it is capable of yielding, and pneumonia serum has been scarcely used at all. Cancer should prove as amenable as tuberculosis to an organized effort for education, early diagnosis and prompt treatment—in this case surgical in nature—while the potency of hygienic education and systematic medical examination of the supposedly well promises tangible results in the reduction of the degenerative diseases of adult life.

It will be even more true in the future than in the past that "public health is purchasable," and that "within natural limitations any community can determine its own death rate."—*American Journal of Public Health.*

Kansas Rat Campaign to Save Food and Prevent Bubonic Plague.

Plague is primarily a disease of the rat, and secondarily of man. The disease is generally transmitted from rat to rat and from rat to man through the agencies of the flea. Rats are great travelers, and have carried plagues to all parts of the globe. An infected rat secreted in a cargo in the hold of a ship or in a box car may take the disease into the town at its point of destination. The prevention of plague naturally resolves itself into a war upon these rodents. The measures for repression and destruction of rats are as follows:

1. *Ratproof buildings.* This is a measure of vast importance in the fight against rats. Rats admitted to a building intrench themselves and are most difficult to dislodge. The lower parts of buildings should be either built out of concrete or reinforced with metal to keep the rats from gnawing through. Basement windows should be screened and doors provided with springs to keep them closed. All water and drain pipes should be surrounded with concrete. Rats find wooden sidewalks a retreat, and these sidewalks should be replaced with concrete.

2. *Keeping food from rats.* Well-fed rats mature quickly, breed often and have large litters. Scarcity of food helps to suppress them. All garbage should be placed in well-covered garbage cans and the garbage frequently removed and burned. Products in a warehouse may be protected with wire cages.

3. *Natural enemies.* Trained dogs and cats may be used to advantage in a rat-eradication campaign.

4. *Traps.* One of the best traps on the market is the "official" guillotine spring trap. The best baits are cheese, bacon, grain and bread. Other traps, such as the cage trap, the barrel-and-pit trap, are sometimes used.

5. *Poisons.* Perhaps the cheapest and most effective poison is barium carbonate. This may be made into a dough with four parts of meal or flour to one part of barium carbonate. Other poisons are strychnine, arsenic, and phosphorus.

6. *Shooting.* Rats may be shot as they come out to forage, about sundown.

7. *Fumigation.* Rats may be killed with certainty in any inclosed structure by the use of sulphur dioxide, carbon bisulphide, hydrocyanic acid gas or carbon monoxide. Sulphur dioxide is particularly useful to destroy rats on board of ships, in cellars, on railway cars, in stables, sewers, and other places where they abound and which are not injured by the corrosive sulphur fumes. No less than three pounds of sulphur should be burned for each 1,000 feet of space, and the exposure should not be less than five hours.

Report of Laboratory for September and October, 1920.

KENNETH F. MAXCY, Director of Laboratory.

The following is a tabulation of the work of the Laboratory for the months of September and October:

	October.		*September.*	
1. Complement fixation test for syphilis:				
Blood specimens (from physicians):				
Positive	39		59	
Negative	277		420	
Doubtful	10		23	
Unsatisfactory	28		60	
Totals	——	354	——	562
Blood specimens (from Doctor Axford at Lansing):				
Positive	19		...	
Negative	86		...	
Doubtful	6		...	
Unsatisfactory	7		...	
Totals	——	118	——	...
Spinal fluid:				
Negative	7		14	
Totals	——	7	——	14
2. Examination of sputum for tuberculosis:				
Positive	14		29	
Negative	83		36	
Unsatisfactory	5		14	
Totals	——	102	——	136
3. Examination of cultures for diphtheria:				
Positive	321		40	
Negative	1,286		124	
No growth	347		19	
Unsatisfactory	7		...	
Totals	——	1,961	——	183
4. Examination of smears for gonococcus:				
From physicians:				
Positive	4		7	
Negative	20		60	
Doubtful	3		2	
Unsatisfactory	2		...	
Totals	——	29	——	69
From detention camp at Lansing:				
Positive	16		17	
Negative	118		197	
Doubtful	...		2	
Totals	——	134	——	216
5. Widals examined for typhoid fever:				
Positive	8		28	
Negative	33		36	
Unsatisfactory	22		14	
Totals	——	63	——	78
6. Stool cultures examined for typhoid fever:				
Positive	2		1	
Negative	13		15	
Totals	——	15	——	16
7. Miscellaneous examinations:				
Malaria: Negative		1		3
Wound culture		2		...
Feces for tuberculosis: Negative		1		...
Actinomycosis: Negative		1		...
Spinal fluid, meningitis: Negative		1		...
Milk fat		1		...
Totals		2,791		1,294

Besides the above, the director of the laboratory investigated and aided in the control of an epidemic of diphtheria at Oswego, Kan., and visited Parsons and Fredonia in consultation with local health officers on diphtheria situation in these respective cities.

Report of Division of Water and Sewage, October, 1920.

ALBERT H. JEWELL, *Chief.*

I.

Permits Issued or Refused for Waterworks and Sewerage.

Date.	*Place.*	*Nature of improvement.*
Oct. 5, 1920	Osawatomie	Waterworks improvements.
Oct. 7, 1920	Glasco	Sewer extensions.
Oct. 13, 1920	Stockton	Sanitary sewer system.
Oct. 18, 1920	Abilene	Sewer extensions.
Oct. 26, 1920	Hiawatha	Sewer extensions.

Final Inspections on Completed Work.

Date.	*Place.*	*Nature of improvement.*
Oct. 4, 1920	Smith Center	Sewer system and sewage disposal works.
Oct. 11, 1920	Belle Plaine	Sewer system.
Oct. 13, 1920	Sedgwick	Sewer system.

Plans or preliminary reports have been received or conferences have been held with municipal authorities for new work at the following places:

Bird City	New water supply.
Caney	Water filtration and softening plant.
Clay Center	Water filtration and softening plant.
Douglass	Extensions to water supply.
Galena	New water supply.
Glasco	Sewer extensions.
Greenleaf	Extensions to water supply.
Hillsboro	New water supply.
Independence	Sewer extensions.
Manhattan	Water softening plant.
Osawatomie	Extensions to sewer system.
Ottawa	Water purification plant.
Rocky Ford Milling & Power Co.	New water supply.
Salina	Sewer extensions.
Sedan	Water purification plant.
Topeka	Extensions to water supply.
Wellsville	New water supply.
White Water	New water supply.

Record of analyses made in Water and Sewage Laboratory at Lawrence during October, 1920:

Source of supply.	*Bact.*	*Chemical.*	*Miscel.*
City supply	376	15	..
Bottled waters	9	5	..
Private supplies	54	..	..
Railroad supplies	2	..	..
Ice	1	..	..
Ice supply	1	..	..
Miscellaneous	12	1	..
Chlorides	...	..	2
Sand	...	..	2
Boiler water	...	1	..
Iron	...	1	..
	455	23	4—482

Licenses Issued.

Date.	*Place.*	*Person or firm, and purpose.*
Oct. 6	Eureka	Eureka Electric & Ice Company. Manufactured ice.
Oct. 6	Highland	Charles B. Hughes. Manufactured ice.
Oct. 6	Iuka	Taylor Ice Co. Manufactured ice.
Oct. 6	La Crosse	La Crosse Milling, Grain & Ice Co. Manufactured ice.
Oct. 6	Meade	R. S. Gerow. Manufactured ice.
Oct. 29	Cherryvale	Atchison, Topeka & Santa Fe. Railroad supply.
Oct. 12	Kansas City	Atchison, Topeka & Santa Fe. Railroad supply.
Oct. 12	Kansas City	Union Pacific. Railroad supply.
Oct. 29	Neodesha	St. Louis & San Francisco. Railroad supply.

Date.	*Place.*	*Person or firm, and purpose.*
Oct. 5	Wichita	Kansas City, Mexico & Orient. Railroad supply.
Oct. 5	Wichita	Midland Valley. Railroad supply.
Oct. 15	Hutchinson	Bennett & Co. Bottled water.
Oct. 15	Hutchinson	T. J. Bixler. Bottled water.
Oct. 6	Independence	Aganippe Springs Water Company. Bottled water.
Oct. 23	Manitou, Colo.	Manitou Mineral Water Company. Bottled water.
Oct. 29	Parsons	Globe Bottling Works. Bottled water.
Oct. 6	Parsons	Rockheart Mineral Water Company. Bottled water.
Oct. 6	Santa Barbara, Cal.,	Veronica Medicinal Spring Water Co. Bottled water.
Oct. 6	Waconda Spgs.	Waconda Sanatorium. Bottled water.
Oct. 25	Waukesha, Wis.	White Rock Mineral Water Company. Bottled water.

PUBLIC HEALTH LABORATORY,
KANSAS STATE BOARD OF HEALTH,
WASHBURN COLLEGE, TOPEKA., KANSAS

In Coöperation with
The U. S. Public Health Service.

Suggestions of State Registrar to Undertakers.

It is the duty of the undertaker to prepare certificates of death. Write them in black ink or on the typewriter. They are a permanent record. Fill every item except medical certificate. If information cannot be secured, write "unknown." Do not leave blanks.

The doctor cannot give you authority to sign his name. Such a signature will not be accepted by this office. Take the certificate to him that he may personally fill out his part. Phone him when you are coming and he will be there. If no doctor attended the case section 6 governs.

When death occurs in a hospital, show name of hospital in item 1 as place of death, but do not fail to give the regular residence in line 2*a*.

Never undertake to make an interment unless you have already surrendered death certificate to local registrar and received a burial permit. The question whether the burial ground does or does not have a sexton to take up such permit makes no difference. You are violating the law if you inter a body without a permit. Getting a permit after the burial will not do. We are instructing local registrars to file information of such cases with us so that we may bring prosecutions.

Most doctors are reasonable. If you have trouble with one about death certificates let us know and we will straighten matters out.

This office is glad to be used as a bureau of information in regard to death registration. Write to us at any time for information.

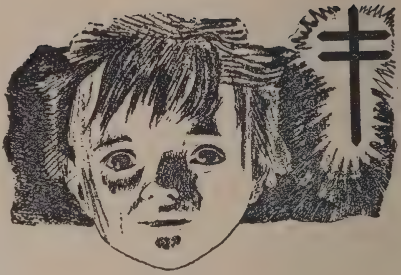
The Come-back Courteous.

"So you've been in a plaster cast for just months at a time, have you, you poor dear boy?" she gushed. "Tell me, just how do you feel?"

"Well, madam," he replied in his best bass voice, "I suppose that I can say that, in the abstract, I feel pretty well; but I have to admit that I feel rotten in the concrete."—*Red Cross Magazine.*

He's Worth It—

Little Tim—counterpart of thousands of helpless little children, rich and poor alike—struggling to live against the savage attacks which tuberculosis makes upon his frail little body. If we fail him—but we must not fail. He's **worth** saving.



Buy **Use**
Tuberculosis **Christmas**
Seals

Each penny Christmas Seal you buy provides added strength to your local tuberculosis association in the fight against this preventable and curable disease.

BULLETIN
OF THE
Kansas State Board of Health

Published Monthly at the Office of the Secretary of the Board, Topeka, Kan.

S. J. CRUMBINE, M. D., Editor.

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Protect the feet.

Keep the coal fires burning.

Wash your hands before eating.

Mix a little play with your work.

Do it first and then talk about it.

Resolved—to do it better this year.

Milk is the most important single food.

Sleep at least eight hours a day—but at night.

Make yourself immune to disease by promoting good health.

Typhoid fever will have been conquered in another generation.

To enjoy abounding health you must become enthusiastically "outdoor" minded.

We hope the blue laws will include one encouraging the practice of parking a brick on the ear of the open-face sneezer.—*Baltimore Sun.*

MORBIDITY REPORT FOR NOVEMBER, 1920.

COUNTIES AND CITIES.	Tuberculosis	Typhoid and Paratyphoid	Smallpox	Diphtheria	Influenza	Scarlet Fever	Measles (morbilli)	German Measles (rubella)	Whooping Cough	Chickenpox	Mumps	Pneumonia (acute, all forms)	Meningitis (epidemic)	Poliomyelitis (epidemic)	Other Diseases (see Addenda)
THE STATE	164	79	147	1198	58	904	635	0	167	156	13	80	3	1	279
Allen, except	2	0	0	17	0	8	0	0	0	0	0	1	0	0	0
Iola	0	0	0	33	0	2	0	0	0	3	0	1	0	0	0
Anderson	0	0	0	26	0	11	0	0	0	0	0	0	0	0	0
Atchison, except	0	0	0	13	0	11	0	0	0	0	0	0	0	0	0
Atchison city	0	0	1	10	0	0	0	0	0	0	0	0	0	0	0
Barber	0	1	0	0	0	14	0	0	9	0	0	0	0	0	0
Barton, except	0	2	6	4	0	10	1	0	0	1	0	1	0	0	0
Great Bend	0	0	0	14	0	5	1	0	0	0	0	1	0	0	0
Bourbon, except	0	0	1	8	0	11	2	0	0	0	0	0	0	0	1
Fort Scott	1	0	0	59	0	3	1	0	0	0	0	0	0	0	13
Brown	0	1	1	7	0	5	0	0	2	1	0	0	0	0	2
Butler, except	2	2	1	35	0	12	0	0	1	1	0	3	0	0	1
Augusta	0	0	0	10	0	0	0	0	0	0	1	0	0	0	1
El Dorado	0	16	5	21	0	4	0	0	0	2	0	2	0	0	0
Chase	0	4	1	1	0	11	1	0	2	0	0	0	0	0	1
Chautauqua	0	1	0	26	0	4	0	0	0	1	0	0	0	0	0
Cherokee, except	1	1	0	21	0	7	0	0	0	0	0	3	1	0	0
Galena	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0
Cheyenne	0	0	2	2	0	5	0	0	0	0	0	0	0	0	0
Clark	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0
Clay	0	0	0	6	1	12	0	0	23	0	0	0	0	0	0
Cloud, except	0	0	2	2	0	1	0	0	0	1	0	0	0	0	0
Concordia	0	0	0	1	1	6	0	0	0	1	0	0	0	0	0
Coffey	0	1	0	1	0	16	0	0	0	1	1	0	0	0	1
Comanche	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cowley, except	4	0	0	16	0	6	1	0	6	4	0	0	0	0	1
Arkansas City	0	0	0	13	0	21	0	0	0	0	1	0	0	0	4
Winfield	10	0	0	1	0	7	0	0	0	1	0	0	0	0	1
Crawford, except	4	2	0	48	7	8	2	0	0	1	0	0	1	0	2
Pittsburg	0	1	3	7	0	6	0	0	0	0	0	0	0	0	5
Decatur	0	3	0	0	0	0	0	0	0	0	0	1	0	0	1
Dickinson	1	2	0	6	0	17	0	0	2	5	0	0	0	0	0
Doniphan	1	0	0	1	0	5	1	0	5	0	0	0	0	0	2
Douglas, except	0	0	1	0	0	3	0	0	0	4	0	0	0	0	0
Lawrence	8	0	0	6	0	9	0	0	0	3	0	2	0	0	7
Edwards*	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Elk	1	0	0	7	1	0	0	0	1	0	0	0	0	0	0
Ellis	1	0	0	7	0	3	20	0	0	0	0	1	0	0	1
Ellsworth	0	0	2	2	0	0	1	0	13	6	0	1	0	0	3
Finney	1	0	1	5	0	10	0	0	2	6	0	2	0	0	0
Ford, except	2	0	1	4	1	1	0	0	0	1	0	1	0	0	0
Dodge City	2	1	0	1	0	0	1	0	1	3	0	1	0	0	3
Franklin, except	0	1	1	0	0	5	0	0	0	0	0	1	0	0	0
Ottawa	1	1	2	1	0	1	0	0	0	1	0	0	0	0	1
Geary, except	0	0	0	1	0	4	1	0	1	0	0	0	0	0	1
Junction City	0	0	0	12	2	5	3	0	1	0	0	1	0	0	0
Gove	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Graham	1	0	5	0	0	19	0	0	0	0	0	0	0	0	0
Grant	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Gray	1	0	0	0	0	11	0	0	3	1	0	0	0	0	0
Greeley*	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Greenwood	1	1	0	9	4	10	0	0	0	0	0	2	0	0	0
Hamilton*	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Harper	0	1	13	9	0	11	0	0	1	3	0	0	0	0	0
Harvey, except	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0
Newton	1	0	0	7	0	0	0	0	0	0	0	0	0	0	0
Haskell	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hodgeman	0	0	0	0	1	0	0	0	0	0	0	2	0	0	0
Jackson	2	0	0	0	3	1	0	0	0	0	0	0	0	0	0
Jefferson	0	1	0	4	4	1	27	0	0	7	0	2	0	0	0
Jewell	0	0	1	1	0	2	0	0	0	0	0	0	0	0	0
Johnson	0	0	0	4	0	4	0	0	0	1	0	1	0	0	0
Kearny	1	0	0	3	0	0	0	0	3	0	0	0	0	0	0
Kingman	1	1	0	0	5	12	0	0	0	0	0	0	0	0	0
Kiowa	1	0	0	1	4	13	0	0	0	0	0	0	0	0	0
Labette, except	0	0	0	20	0	0	0	0	0	5	0	0	0	0	14
Parsons	21	1	0	30	8	7	0	0	0	0	0	3	0	0	4
Lane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Leavenworth, except	0	0	0	7	0	2	0	0	0	1	0	0	0	0	1
Leavenworth city,	2	0	0	18	0	1	0	0	0	7	0	0	0	0	1

MORBIDITY REPORT FOR NOVEMBER, 1920—Concluded.

Counties and Cities.	Tuberculosis	Typhoid and Paratyphoid	Smallpox	Diphtheria	Influenza	Scarlet Fever	Measles (morbilli)	German Measles (rubella)	Whooping Cough	Chickenpox	Mumps	Pneumonia (acute all forms)	Meningitis (epidemic)	Poliomyelitis (epidemic)	Other Diseases (see Addenda)
Lincoln	0	1	0	1	0	9	1	0	2	0	0	4	0	0	1
Linn	1	2	2	1	0	17	0	0	4	0	0	1	0	0	0
Logan	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
Lyon, except	3	0	0	1	0	15	8	0	0	0	0	0	0	0	0
Emporia	1	1	0	3	0	12	38	0	0	6	0	0	0	0	2
Marion	5	0	1	9	2	26	0	0	0	3	0	0	0	0	11
Marshall	1	1	29	0	0	1	1	0	6	2	0	1	0	0	2
McPherson	1	5	2	4	0	4	0	0	0	0	0	0	0	0	1
Meade	0	0	1	11	1	7	0	0	0	0	0	1	0	0	1
Miami	1	1	0	14	2	1	0	0	0	0	0	0	0	0	0
Mitchell	0	0	12	0	0	5	0	0	0	0	0	0	0	0	0
Montgomery, except	2	1	0	31	2	11	0	0	0	0	2	0	0	0	0
Coffeyville	1	0	0	14	2	4	0	0	0	4	0	1	0	0	1
Independence	1	0	0	50	1	8	1	0	5	4	0	4	0	0	0
Morris	0	0	0	4	0	7	0	0	0	0	0	0	0	1	0
Morton	0	0	0	0	0	5	1	0	4	0	0	1	0	0	0
Nemaha	2	1	0	2	0	3	0	0	0	0	0	0	0	0	0
Neosho, except	0	3	0	5	0	16	4	0	0	0	0	0	0	0	1
Chanute	0	0	0	12	0	14	0	0	0	0	4	0	0	0	0
Ness	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
Norton	6	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Osage	2	2	2	2	0	3	4	0	0	4	0	0	0	0	2
Osborne	1	0	0	1	0	1	1	0	9	1	0	0	1	0	0
Ottawa	1	0	0	2	0	5	1	0	0	1	0	1	0	0	1
Pawnee	0	1	7	1	0	7	0	0	1	1	1	0	0	0	0
Phillips	0	0	1	0	0	3	0	0	1	5	0	0	0	0	0
Pottawatomie	1	0	0	5	0	10	16	0	0	0	0	0	0	0	0
Pratt	0	1	0	2	0	45	1	0	5	1	0	0	0	0	0
Rawlins	0	0	0	1	0	9	0	0	0	0	0	0	0	0	0
Reno, except	0	3	0	14	0	19	0	0	0	5	2	3	0	0	1
Hutchinson	2	0	0	19	0	13	0	0	0	0	1	1	0	0	31
Republic	1	0	0	12	0	3	0	0	1	0	0	2	0	0	3
Rice	0	0	0	8	0	8	0	0	9	4	0	0	0	0	1
Riley, except	0	1	8	0	0	1	0	0	0	0	0	0	0	0	0
Manhattan	1	0	0	3	0	2	0	0	0	0	0	1	0	0	3
Rooks	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0
Rush	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Russell	0	1	0	0	0	2	0	0	0	9	0	0	0	0	0
Saline, except	2	0	2	2	0	6	0	0	0	0	0	0	0	0	0
Salina	0	0	1	21	0	11	1	0	0	0	0	0	0	0	1
Scott	1	0	0	0	0	2	0	0	0	1	0	0	0	0	0
Sedgwick, except	0	2	0	19	1	6	0	0	0	0	0	0	0	0	1
Wichita	21	0	0	135	0	56	0	0	8	8	0	2	0	0	27
Seward	0	0	0	3	0	2	0	0	0	0	0	0	0	0	0
Shawnee, except	0	0	0	5	0	6	30	0	0	0	0	0	0	0	8
Topeka	11	1	0	16	0	37	332	0	2	3	0	5	0	0	46
Sheridan	0	0	0	0	0	12	0	0	4	2	0	0	0	0	0
Sherman	1	0	5	0	0	5	0	0	0	0	0	0	0	0	0
Smith	1	0	2	0	0	3	0	4	9	2	0	1	0	0	0
Stafford	1	0	2	2	0	7	0	0	0	1	0	0	0	0	0
Stanton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stevens	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Sumner, except	0	0	0	25	3	9	0	0	1	1	0	0	0	0	2
Wellington	0	2	0	38	0	10	0	0	1	0	0	0	0	0	0
Thomas*	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Trego	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wabaunsee	0	1	0	0	0	13	2	0	11	0	0	0	0	0	0
Wallace*	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Washington	0	0	0	7	0	2	1	0	0	0	0	0	0	0	0
Wichita	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0
Wilson	2	1	11	30	0	14	121	0	0	2	0	1	0	0	0
Woodson	0	0	0	1	0	19	0	0	0	0	0	0	0	0	0
Wyandotte, except	1	0	0	20	0	4	0	0	0	0	0	0	0	0	1
Kansas City	28	2	7	72	1	19	6	0	1	14	0	17	0	0	60
Rosedale	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0

* No report.

Other communicable diseases: Cancer, 26; chancroid, 3; erysipelas, 10; gonorrhœa, 144; malaria, 2; pellagra, 1; leprosy, 1; syphilis, 85; tetanus, 1; trachoma, 6.

The Kansas Health Car, "Warren."

The Kansas health car, "Warren," has just completed the first half of its fifth yearly itinerary. In view of the present interest in graphic methods of giving health instruction, a description with an appraisement of the work may not be amiss.

In 1915 the Pullman company presented an old observation Pullman car to the State Board of Health. An appropriation was made for remodeling and equipping the car, and a small maintenance appropriation has been made for each succeeding year.

The car was named in memory of the promising son of Dr. S. J. Crumbine, secretary of the State Board of Health, who died in Shanghai, China, in 1916, at the early age of twenty-four.

The car has made one round trip each year, going over a different road each time and making, roughly, a loop into each of the four corners of the state. The car has traveled over the Santa Fe, the Union Pacific, the Missouri Pacific, Frisco, and the Rock Island. It now remains to make a series of shorter trips, reaching remaining portions of the state. The railroad companies have given splendid coöperation in making minimum charges for mileage and service. In addition to this, local agents and all other railroad employees have been uniformly helpful and cordial.

PERSONNEL.

During the first two years the car was operated by two public-health nurses and one helper. One of these nurses was contributed by the State Tuberculosis Association. Lack of funds prevented the continuation of this arrangement, and for the past two years the car force has consisted of a woman physician and one helper. This helper has been sometimes a student of social service, sometimes a nurse, sometimes just a capable woman. This year the car has been conducted by a public-health nurse and a social worker.

The two rear sections of the Pullman were converted into tiny living quarters, as it is often impossible to secure satisfactory accommodation outside. As many conveniences have been installed as the restricted space will permit. The wiring of the car is such that it is always possible to attach the city circuit where there is one. This makes it possible to use a grill, fans, etc. The workers usually become quite attached to the "play housekeeping" and prefer living on the car to going outside.

During the first three years the car stopped at almost every station, and the length of the stay varied from one day to two weeks, according to the size of the place. This year the cost of mileage and moving was raised, and it became necessary to limit the stops to towns of 500 population or over, and the length of the itinerary was also shortened. It has made two small towns or one large town each week.

FEATURES OF THE EXHIBIT.

The car is fitted with four long exhibit tables with built-in cabinets underneath for literature and supplies. On these tables are arranged various graphic exhibits and several chart racks. A row of charts hang on a level with the adult eye. The curved space above the tops of the windows is also filled with charts.

The exhibit is arranged by subjects as follows, beginning at the front entrance:

LEFT-HAND.	RIGHT-HAND.
Foods.	Fresh air.
Milk.	Homemade playground.
Teeth, tonsils and adenoids.	Exercise, posture, clothing.
Child care.	Infant and prenatal care.
Scales.	Personal hygiene.
School hygiene.	Communicable diseases.
Venereal disease.	Tuberculosis.
Sanitation.	Examination quarters for mothers and babies.

The accompaning photographs will give an idea of the detail and arrangement of the exhibit, and the accompanying stories will show why the car and its exhibit never become monotonous.

* * *

One day as the helper was reiterating the need for a child having a glass of milk, some kind of fruit, etc., at each meal, a little child spoke up and said, "Mamma said us kids would eat what we could git and be glad we had it."

Of course the child was urged to bring his mother to the car, and when he brought her and the value and economy of milk had been impressed upon her, she said, "I guess that's right, all right."

* * *

Whenever the nurse or helper go on the streets of the towns they are usually greeted by some of the many little visitors with a story as to the amount of milk they are drinking, or the number of times they use their toothbrush or take a bath, and so on and so on.

* * *

"How many of you children have a toothbrush, wash cloth, towel, drinking cup, etc.?" asked the helper. Then going on to the next point of the exhibit she asked, "Do any of you children know whether you have adenoids?"

"I have!" said one little youngster, whose mind was still on the former questions. Suddenly he realized his mistake and hastened to explain, "I did have some adenoids, but I lost them!"

* * *

In the section on sanitation there are models of clean and dirty milk barns, with a card above asking, "From which farmer would you rather buy your milk?"

Now it happens that the cow in the dirty barn is a rather large, wooden one, while the cow in the clean barn is a much smaller, celluloid one. One day a nine- or ten-year-old youngster stood before this exhibit, and after several minutes said, "I'd rather buy milk from that clean farmer, all right, but that cow of his is too little to milk."

Another day a little boy stood before the model of the farm home, which shows the contamination by the outdoor toilet of the family well (shown in picture No. 2), and failing to realize that it is just a section, said, "That's true, but it's awful dangerous, 'cause the baby might fall over the edge."

* * *

And so on all around the car. No two groups are ever alike, and no day passes without some funny or human-interest story to be added to the already long list.

* * *

Another thing that makes life worth living on the car is the gratitude and appreciation that is so freely expressed. Scarcely any one leaves the car without some expression like these:

"This is a fine thing."

"We certainly are fortunate in getting the car to come here."

"I'm going to send my wife down here!"

"I didn't know there was anything like this. Wish I had been taught these things as a child."

"That's just sense, common sense. That's what that car is!"

"Some pumpkins, ain't it, boy!"

A little more dignified expression came from a very manly, fine young chap who had been a frequent visitor during a week's stop in Columbus: "This surely is a fine thing, and I'm proud of my state for having a car like this."

* * *

Besides remarks like these there are other encouraging things, such as this little story:

A fifteen- or sixteen-year-old boy, like all boys of this age or older who visit the car, was given one of the sex-hygiene pamphlets for boys. He read it through while at the car, then walking over to the helper said: "Here, you can have this back, 'cause I know all that. My mother, she's the smartest woman in this town, and she told me all about that before."

"You must have a good mother, son," said the helper.

"I have," he said. "She's the smartest woman in this town, and she tells me everything."

* * *

METHOD OF OPERATION.

Advance publicity is secured by letters written to the mayor, city and county superintendents of schools, a leading club woman, health officers and newspapers. These letters explain the purpose of the car, give the itinerary, and solicit coöperation. Data are furnished for newspaper publicity. On the arrival of the car attractive framed posters are placed in the store windows.

HOW TO EAT

THE GENERAL PROGRAM.

On arrival, a citizens' committee usually visits the car and proffers assistance. In the absence of this courtesy, the car staff telephone the individuals who have responded most cordially to the correspondence.

A conference of leading citizens is usually held on the car the first evening of its stand. The local situation is discussed and it is determined how the car can best serve this particular community. Usually it is arranged to hold one or more public evening meetings. A speaker or a film may be sent from the State Board of Health for this purpose. Sometimes the car physician is invited to speak at regular club meetings. Occasionally it is arranged to open the car for an evening and explain the exhibit to business men and others who cannot conveniently visit it in the daytime.

The superintendent of the schools is always instructed by correspondence to send the school children, by grades, in charge of their teachers. Each grade spends one school period; the forenoons are reserved for the schools. The exhibit is explained, and usually all the children are weighed and measured. When time and the size of the group permit, the mouths are also examined.

The afternoon is open to adults and mothers with children of the preschool age. A special effort is made to examine these children and confer with the mothers. The car physician takes care of such examinations while the assistant explains the exhibit to other visitors.

A great deal of free literature is distributed, discrimination being used to place it in the hands of persons evidently interested in the various subjects. A table is set with an assortment of books helpful to mothers. A pad of paper and pencil invite the taking of title and publisher.

WHAT HAS BEEN ACCOMPLISHED.

(1) COMMUNITY AWAKENING. While this is always an intangible thing and due to a complexity of causes, the fact remains that in various communities leading citizens have said that the visit of the car crystallized community initiative to the extent that some worth-while thing followed. In one town a school nurse was hired, soon followed by a community, and later by a county nurse. In a number of communities public-health nurses soon followed in the wake of the car. Projects in community sanitation, recreation, better quarantine, better public-health service and better school hygiene were distinctly furthered by the work of the car.

(2) INDIVIDUAL HELP TO MOTHERS. The car affords an opportunity for many mothers to get help with their individual difficulties which they otherwise could not get. Many instances of pathetic ignorance on the part of mothers and tragic handicap to their children come to the car. Parents sometimes drive many miles to get this coveted advice.

(3) THE INSTRUCTION OF THE ADULT PUBLIC. One of the most stimulating experiences which comes to the car worker is the satisfaction of hearing some farmer say, while looking at the soil-pollution exhibit: "Well, now, I believe that's just what's the matter at our place. I never thought of that before." One such man refused to give his address.

YOUR MOTHER

"I'm afraid you'd come out and see my place if you knew where I live, and I sure would be ashamed. I want to beat you to it and get it fixed up."

School directors stand about the rural-school bubbling fountain and the sanitary privy and discuss improvements. The miniature septic tank is a never-ending source of interest to rural householders, and the indoor sanitary toilet to their wives.

(4) HELP FOR THE CHILDREN. The great work of the car is with the children. They grasp everything—personal, school and community. They go home and bring their parents. Quite often a school child will go home and bring back a little brother or sister for appraisement.

One of the car physicians, Dr. Blanche Hopkins, says, in writing of the car:

"We found children most enthusiastic about health work, proving that if they are given half a chance they will become modern health crusaders and sanitary police. I believe that health work properly presented to school children will do more to clean up a town in a month by inspecting food supply, disposal of garbage and such agencies than all the laws and regulations a town council can pass in a year. A few examples of the children's enthusiasm are as follows: We were discussing flies and manure piles when someone broke out, 'Manure piles! Did you see that awful livery stable right up the street, almost on the main street?' And as I seemed to doubt, a dozen voices at once tried to describe the location. It was suggested that a committee of school children wait upon the mayor to convince him that many sick babies might result from the flies born at the manure piles, for the children had learned how flies carry disease to the baby.

"At another time a group of children told me about their poor water supply at school. Their tank having leaked, it was resting and rusting behind the schoolhouse. The teacher had frequently reported this to her board. We asked the children to call a meeting of the board at the car in order that we might discuss the need of good water for the school. The children never rested for two days until they had rounded up the school board, and then they hung around in order to hear what the board would say.

"A few hours before we pulled out of one city a very busy merchant came to the car and said: 'My children have given me no peace day or night since this car came to town, and I thought best to come and take a few lessons in health myself.' Another time a father reported that when he and his wife retired to the second floor for the night, a blast of cold air struck them. He said, 'Mercy, what is the matter up here?' His wife replied, 'Oh, nothing. They have been down to the health car.' Upon investigation they found the four children peacefully sleeping with every window wide open. The children had read the sign, 'Sleep with the windows open,' and had seen our models of sleeping porches. The father considered it a good joke upon himself. We talked to the children about babies who were not properly fed and who had no chance to grow. That week the school children personally conducted a young mother and her child to the car. The child, though two years old, had never walked, due largely to the fact that he had not been fed properly.

"It was our custom to show the children the car by taking the regular classes with their teacher. We arrived at a small town on Saturday. For some reason the principal of the school had neglected to advertise the car. Saturday being a holiday, it was impossible to reach all the children. The ten-year-old son of the mayor, evidently well schooled in civic duties, took upon himself the task of advertising the car. He came at intervals, carrying one or two on his bicycle, several children bringing up the rear.

We taught him how to measure and weigh. With an assistant he wrote down the amount of any child underweight. When he found one underweight he promptly said, 'March over to the doctor, open your mouth, and let her see what is the matter with you.' All day long this little fellow worked, bringing relays of school children. The parents realizing the enthusiasm of the children, came out in the afternoon to see the exhibit."

Toward the latter end of the last trip of the car, the physician asked the teachers to have the children write up their visit and let her read the papers. These papers were most suggestive. A couple, selected at random, are appended. These papers have given the State Board of Health an inspiration for remodeling the exhibit before it starts out again, with the purpose of placing greater emphasis on positive health concepts. More dolls, more miniatures and graphic models will be used. The aim will be to make the major part of the exhibit self-explanatory to a fifth-grade child, and give him a consecutive and unified health story.

BY A FOURTH-GRADE BOY.

"This was a health car. Doctor Crumbine sent it out into the state of Kansas to prevent people from getting diseases. We should get plenty of fresh air by sleeping on the porch and leaving our window open at night so we won't get tuberculosis. I do not want to have tuberculosis. The germ might live in an old, dirty house. If we let tuberculosis go too long it cannot be cured, and if you eat healthy foods and get plenty of fresh air and right kind of exercise it can be cured.

"We should breathe through our nose. If we breathe through our mouth it will make our teeth crooked. We should wash our teeth to get all the food from out of between our teeth. We should be careful of the water because it may have germs in it.

"A well should be placed on a high place, because the germs won't get in the well. Toilet should be screened with wire. Flies carry many germs. We should poison a fly. Milk is our best food. Our food should be clean. We should eat less meat and more vegetables. You should keep your body warm in the winter."

BY AN EIGHTH-GRADE GIRL.

"The second week in December the Kansas health car visited Goodland. On December 11 the boys and girls of the seventh and eighth grades were permitted to visit it.

"Upon entering the car you are under the impression that you are visiting a display of doll houses. But they are miniature tuberculosis cottages. They show how those afflicted with this terrible disease should live. In these houses or on the porches are miniature cots such as tubercular patients should sleep on. Fresh air, nourishing food and rest are the best cures for tuberculosis. A map showed the number of cases of this disease in Kansas. It was very strongly impressed on us that tuberculosis is a curable disease and a preventable one.

"We passed on and were warned as to the danger of the many contagious diseases. We learned that there have been many more deaths from measles than from scarlet fever in Kansas, though scarlet fever is much more feared. People do not use enough precaution with measles or other diseases that are catching.

"On the other side were foods both helpful and injurious. One thing which attracted our attention was a quart of milk which had ribbons fastened from it to different plates of meat, to show that one should get as much nourishment from one quart of milk as from all these meats.

"We then saw where they had displayed best amusements and comforts for children and babies, also proper clothing for babies. Two babies were examined while we were there, which was very interesting. One very economical thing was a baby carriage made of two clothes baskets. One is used for the carriage and the other is cut in two and half used for the hood. It was enameled white and lined and very neat and comfortable looking. Almost anybody could make one.

"There were many other things of interest, such as proper sewerage and other health problems.

"We were then weighed, and found we have one perfect girl and one perfect boy in our class. I was four pounds too heavy.

"Everyone, I am sure, enjoyed their visit to the car and received a great deal of good from it."

Report of Laboratory for November.

MEMORANDUM. DECEMBER 6, 1920.
To: Secretary State Board of Health.
From: Director of Laboratory.
Subject: Report of work done by Laboratory for the month of November, 1920.

The following is a tabulation of the work of the laboratory for the month of November:

	November.	*October.*
1. Complement fixation test for syphilis:		
Blood specimens:		
From physicians:		
Positive	63	39
Negative	252	277
Doubtful	25	10
Unsatisfactory	29	28
Totals	369	354
From Lansing:		
Positive	19	19
Negative	44	86
Doubtful	18	6
Unsatisfactory	8	7
Totals	89	118
Spinal fluid:		
Positive	0	....
Negative	7	7
Doubtful	1	....
Globulins	5	....
Totals	13	7
2. Examination of sputum for tuberculosis:		
Positive	29	14
Negative	83	83
Unsatisfactory	6	5
Totals	118	102
3. Examination of cultures for diphtheria:		
Positive	439	321
Negative	1,817	1,286
No growth	248	347
Unsatisfactory	10	7
Totals	2,514	1,961
4. Examination of smears for gonococcus:		
From physicians:		
Positive	25	4
Negative	3	20
Doubtful	....	3
Unsatisfactory	3	2
Totals.	31	29

	November.	*October.*
From detention camp at Lansing:		
Positive	25	16
Negative	144	118
Unsatisfactory	3	....
Totals	172	134
5. Examination of Widals for typhoid fever:		
Positive	14	8
Negative	6	33
Unsatisfactory	7	22
Totals	27	63
6. Examination of stool cultures for typhoid:		
Positive	1	2
Negative	12	13
Unsatisfactory	2	....
Totals	15	15
7. Miscellaneous examinations:		
Toxin-antitoxin mixtures tested	2	....
Actinomycoses culture	1	....
Anthrax culture	1	....
Darkfield examinations	2	....
Wound culture	1	....
Blood culture	1	....
Totals	8	9
Grand totals	3,356	2,791

KENNETH F. MAXCY, M. D.,
Director of Laboratory.

Record of analyses made in Water and Sewage Laboratory at Lawrence during November, 1920:

Source of supply.	*Bact.*	*Chem.*	*Miscel.*
City supply	406	27	....
Bottled water	8	2	....
Private supplies	31	....	....
Railroad supplies	3	....	....
Ice	1	....	....
Chemical	...	4	....
Chlorides	...	....	2
Sand	...	....	1
Totals	449	33	3—485

Licenses Issued.

Date.	*Place.*	*Person or firm and purpose.*
Nov. 17	Kinsley	Kinsley Artificial Ice Co. Manufactured ice.
Nov. 18	Russell	Ira D. Crofoot. Manufactured ice.
Nov. 16	Brooklyn, N. Y.	Kalak Water Company. Bottled water.
Nov. 16	Coffeyville	Crystal Springs Water Company. Bottled water.
Nov. 30	El Dorado	Polar Water Company. Bottled water.
Nov. 2	Topeka	Topeka Pure Water Company. Bottled water.

Autumn.

When autumn comes with air that's chill,
With foliage glorious to behold,
It brings along—alas! alas!
The thing we call the autumn cold.
The doctor's office fills again,
No longer to the links he goes,
For father sneezes, mother coughs
And baby has a running nose.

—*Journal American Medical Association.*

Food Analysis LXX.

E. H. S. Bailey, *Director.* W. S. Long, *Chemist in Charge.*

July 1, 1920.

OFFICIAL SAMPLES.

BEVERAGES.

50314. Lemon Sour Pop. Whistle Bottling Co., Wichita, Kan. Passed.
50315. Grape Pop. Small quantity of uncertified aniline dye present. Whistle Bottling Co., Wichita, Kan.
50316. Grape Rite. Whistle Bottling Co., Wichita, Kan.
50318. Lemon Sour Pop. Wichita Vinegar and Bottling Co., Wichita, Kan. Passed.
50319. Root Beer Pop. Wichita Vinegar and Bottling Co., Wichita, Kan. Passed.
50321. Concord Grape Pop. Clay Center Bottling Works, Clay Center, Kan. Passed.
50322. Lemon Sour Pop. Passed.
50324. Grape Punch. Passed.
50325. Lemon Sour Pop. Passed.
50326. Grape Punch. Passed.
50327. Lemon Sour Pop. Passed.
60758. Lemon Sour Pop. Osage City Bottling Co., Osage City, Kan.
72095. Lemon Sour Pop. Fresch and Luther, Marysville, Kan. Passed.
72096. Sweet Pop. C. A. Knuffke, Hanover, Kan. Passed.
73001. Lemon Pop. Nevin Bros., Blue Rapids, Kan. Passed.
73002. Lemon Sour Pop. Hiawatha Bottling Co., Hiawatha, Kan. Passed.
81310. Lemon Sour Pop. H. T. Penway, Fredonia, Kan. No sample.
81311. Lemon Sour Pop. H. T. Penway, Fredonia, Kan. Passed.
81312. Lemon Sour Pop. W. E. Maxwell, Neodesha, Kan.
81313. Lemon Sour Pop. W. E. Maxwell, Neodesha, Kan. Sample lost.
93383. Lemon Sour Pop. Winfield Coca-Cola Bottling Co. Passed.
93384. Lemon Sour Pop. Allen & Kuhn. Passed.
93386. Lemon Sour Pop. Coca-Cola Bottling Co., Caldwell, Kan. Retailers. F. B. Watson, C. L. Wright. Passed.
93391. Lemon Sour Pop. Passed.

MISCELLANEOUS.

22817. Red Ace Corn. Altoona Canning Co., Altoona, Iowa. Passed.
22811. Baking Powder. Calumet Baking Powder Co., Chicago, Ill. Passed.
22807. Food Color. Sent by Dr. H. E. Doty, Concordia, Kan. Passed.
22808. Baking Powder. Rumford Chemical Works, Providence, R. I. Passed.
22809. Baking Powder. The J. C. Grant Chemical Co., East St. Louis, Ill. Passed.
22810. Baking Powder. Royal Baking Powder Co., New Jersey. Passed.
22812. Baking Powder. Jacques Manufacturing Co., Chicago, Ill. Passed.
22813. Baking Powder. Royal Baking Powder Co., N. J. Passed.
22814. Saccharine. Monsanto Chemical Works, St. Louis, Mo. Retailer, Topeka Spice Mills, Topeka, Kan. A mixture of saccharine and carbonate.
22815. Beverage. Honey Boy Cordial Co., St. Louis, Mo. Retailer, M. Scaletta, Leavenworth, Kan. Saccharine present. Illegal.
22816. Imitation Grape Flavor. Alcohol, 49.42 per cent.
60749. Canned Peaches. Passed.
72093. Crab Apple Jelly. McCord-Kistler Mercantile Co., Topeka, Kan. Retailer, E. M. Newman, Sabetha, Kan. Passed.
73003. King's Vegetable Soup. Wittenberg-King Co., Portland, Ore. Passed.
93376. Imitation Vanilla. Sternwender Stoffregen Coffee Co., St. Louis, Mo. Retailer, Higginson Grocery Co., Wichita, Kan. Colored with caramel. Illegal.
93377. Velvet Yolks. The International Co., Baltimore, Md. Retailer, J. H. Butte, Wichita, Kan. Passed.
93387. Ice Cream. Retailer and manufacturer, Gulick Bros., Caldwell, Kan. Fat, 6.50 per cent. Illegal.
93388. Ice Cream. Manufacturer, Enid Ice and Fuel Co., Enid, Okla. Retailer, F. B. Watson, Caldwell, Kan. Fat, trace. Illegal.
93389. Ice Cream. Enid Ice and Fuel Co., Enid, Okla. Retailer, J. B. Brubaker Pharmacy, Caldwell, Kan. Fat, trace. Illegal.
93390. Ice Cream. Fat, 18 per cent. Passed.

UNOFFICIAL SAMPLES.

272. Milk. Preservative, none. Passed.
273. Ice Cream Improver. Product mainly starch.
1260. Ginsol. Available Cl_2 .22 gram per 100 cc.
1261. Ice Cream. Sent in by J. E. Brogan, The Junction Drug Co., Coffeyville, Kan. Passed.
1262. Ryson Baking Powder. General Chemical Co., New York City, N. Y. Passed.
1263. Baking Powder. Ridenour-Baker Grocery Co., Kansas City, Mo. Passed.
1264. Baking Powder. Layton Pure Foods Co., St. Louis, Mo. Passed.
1265. Baking Powder. Royal Baking Powder Co., N. Y. Passed.
1266. Vanilla Flavoring. From Attorney Finley, St. Francis, Kan. Manufacturer, Ridenour-Baker Grocery Co., Kansas City, Kan. Alcohol, 38.86 per cent.
1255. Tomatoes. Sent in by Parsons State Hospital for Epileptics. Passed.
1256. Prunes. From Parsons State Hospital for Epileptics. Insects present. Illegal.
1257. Rice. From Parsons State Hospital for Epileptics. Passed.
1258. Vanilla Flavoring. From Parsons State Hospital for Epileptics. Passed.

A HAPPY NEW YEAR.

The State Board of Health wishes for the people of Kansas a happy and prosperous new year.

The secretary of the Board ventures to point out the way how everyone can be happy and prosperous. It is very simple, yet very certain of results, namely, to be healthy. How can one be happy and be sick, or how can one work and prosper if suffering from disease? Health must always be the very foundation of both personal and national wealth and prosperity, as well as the measure of the strength of the defensive forces of the nation.

Most disease is preventable, and a good way to prevent disease is to study and obey the laws of health. Many of the insidious and disabling diseases may be discovered early by having a thorough physical examination made periodically, and when thus early discovered, can be remedied or corrected before irreparable damage is done.

Let us begin the new year by having an inventory made of our physical assets and liabilities, with the same keen sense that careful and prosperous men apply to their business. Make a date with your doctor for a physical examination.

Let us be prosperous and happy by promoting personal and public health.

8-5601

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OF THE
Kansas State Board of Health

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Strive!

To gain a friend, be one.—*Hubbard.*

Every death from typhoid fever demands a coroner's inquest.—*Estey.*

Have you made your annual inventory of your physical assets and liabilities?

Money appropriated for public-health work and wisely spent is an investment and not an expense.

To raise the level of national health is one of the surest ways of raising the level of national happiness. No branch of legislation is more really valuable than that which is occupied with the health of the people. —*Lecky.*

SNEEZABLE.

A versatile girl from Seaview
Was booked for a speech on "Who's Who?"
  When the time came, behold!
  The poor thing had a cold,
So about all she said was "Ka-choo!"
—*Penn State Froth.*

MORBIDITY REPORT FOR DECEMBER, 1920.

COUNTIES AND CITIES.	Tuberculosis	Typhoid and Paratyphoid	Smallpox	Diphtheria	Influenza	Scarlet Fever	Measles (morbilli)	German Measles (rubella)	Whooping Cough	Chickenpox	Mumps	Pneumonia (acute) (all forms)	Meningitis (epidemic)	Poliomyelitis (epidemic)	Other Diseases (see Addenda)
THE STATE	153	30	289	637	43	736	862	3	148	214	23	150	4	3	208
Allen, except	10	0	2	15	0	1	1	0	0	2	0	0	0	0	0
Iola	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Anderson	0	0	0	11	0	1	0	0	0	0	0	0	0	0	0
Atchison, except	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Atchison city	0	0	0	19	0	2	1	0	0	1	0	0	0	0	0
Barber	0	0	0	1	0	9	0	0	6	0	0	1	0	0	0
Barton, except	1	0	4	9	0	11	4	0	0	0	0	0	0	0	0
Great Bend	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bourbon, except	0	0	3	2	0	14	0	0	0	0	0	0	0	0	0
Fort Scott	0	0	0	19	0	1	0	0	2	1	0	1	0	0	4
Brown	0	0	5	1	0	11	0	0	0	3	0	0	0	0	0
Butler, except	1	5	25	30	0	17	4	0	3	1	4	8	0	0	0
Augusta	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
El Dorado	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chase	0	0	1	0	0	7	0	0	0	0		1	0	0	0
Chautauqua	0	0	0	22	0	1	0	0	0	0	0	0	0	0	1
Cherokee, except	0	1	0	7	1	3	0	0	0	1	0	1	0	0	2
Galena	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cheyenne	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0
Clark	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0
Clay	0	0	2	4	1	5	8	0	8	2	0	1	0	0	0
Cloud, except	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Concordia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coffey	0	1	0	7	0	13	0	0	0	6	0	0	0	0	0
Comanche	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cowley, except	3	2	0	13	1	14	4	0	1	9	2	6	0	0	4
Arkansas City	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Winfield	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crawford, except	3	0	1	21	2	7	8	0	0	0	0	5	0	0	3
Pittsburg	2	0	1	3	0	5	0	0	0	3	0	1	0	0	2
Decatur	0	0	0	1	0	3	0	0	0	0	0	1	0	0	1
Dickinson	0	0	3	0	0	11	1	0	1	1	0	0	0	0	2
Doniphan	1	0	1	3	0	12	2	0	0	3	0	0	0	0	2
Douglas, except	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0
Lawrence	1	1	0	4	0	5	1	0	0	0	0	0	0	0	2
Edwards	0	0	0	1	1	5	0	0	0	0	0	0	0	0	0
Elk	0	0	0	4	0	1	0	0	1	0	0	1	0	0	1
Ellis	0	0	0	14	0	1	21	0	4	0	0	0	0	0	1
Ellsworth	0	0	27	9	0	0	0	0	3	7	0	6	0	0	1
Finney	0	0	0	2	1	8	0	0	1	15	0	6	0	0	0
Ford, except	7	0	1	2	0	11	0	0	0	7	0	6	0	0	0
Dodge City	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Franklin, except	5	0	1	1	0	3	1	0	0	3	0	0	0	0	0
Ottawa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Geary, except	0	0	0	2	2	9	0	0	9	4	1	5	0	0	2
Junction City	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gove	0	0	0	0	0	6	2	0	0	0	0	2	0	0	0
Graham	1	0	7	0	0	6	1	0	0	0	0	0	0	0	0
Grant	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
Gray	0	0	0	0	1	9	0	0	6	1	0	0	0	0	0
Greeley*	....	....	....	....	....	....	....	....	....	....	....	....	....	..0	....
Greenwood	0	0	1	5	0	8	6	0	3	0	0	4	0	0	1
Hamilton*	....	....	....	....	....	....	....	....	....	....	....	....	....	..0	....
Harper	0	0	1	3	0	5	0	0	6	0	0	1	0	0	0
Harvey, except	2	0	3	10	0	4	6	0	3	0	0	0	0	0	0
Newton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Haskell	0	0	24	0	5	0	0	0	0	0	0	3	0	0	0
Hodgeman	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Jackson	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0
Jefferson	0	2	2	0	0	0	39	0	1	7	0	2	0	0	0
Jewell	0	0	0	0	0	1	0	0	0	0	0	6	0	0	0
Johnson	2	0	0	6	0	7	0	0	0	4	0	0	0	0	0
Kearny	0	0	0	0	0	0	0	0	0	0	0	2	0	0	4
Kingman	0	1	0	3	2	10	0	0	2	0	0	1	0	0	0
Kiowa	1	0	0	2	0	26	0	0	0	0	0	0	0	0	0
Labette, except	0	0	0	5	0	0	0	0	0	0	0	0	0	0	10
Parsons	2	0	3	10	0	4	0	1	0	2	0	1	0	0	12
Lane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Leavenworth, except	1	0	0	1	1	1	1	0	0	0	0	2	0	0	0
Leavenworth city	1	0	2	16	0	6	0	0	0	3	0	0	0	0	6

MORBIDITY REPORT FOR DECEMBER, 1920—Concluded.

COUNTIES AND CITIES.	Tuberculosis.....	Typhoid and Paratyphoid...	Smallpox........	Diphtheria......	Influenza.......	Scarlet Fever.....	Measles (morbilli)......	German Measles (rubella)......	Whooping Cough.	Chickenpox.....	Mumps.........	Pneumonia (acute) (all forms).....	Meningitis (epidemic).....	Poliomyelitis (epidemic.)....	Other Diseases (see Addenda)..
Lincoln..........	0	0	0	0	1	0	0	0	37	1	1	2	0	0	0
Linn..........	0	0	1	7	0	6	18	0	3	5	0	2	0	0	0
Logan..........	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0
Lyon, except.......	2	0	0	9	0	23	31	0	0	2	0	2	0	0	0
Emporia........	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Marion..........	1	0	5	5	0	10	1	0	0	1	0	0	0	0	7
Marshall..........	0	0	43	0	0	10	6	0	0	1	0	1	0	0	0
McPherson........	12	0	0	5	0	9	2	0	0	0	0	1	0	0	0
Meade..........	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0
Miami..........	1	0	0	18	1	1	0	0	0	1	0	1	0	0	0
Mitchell..........	0	0	5	0	0	7	1	0	0	0	0	0	0	0	0
Montgomery, except	4	1	1	27	0	13	1	0	3	4	1	4	1	0	1
Coffeyville.......	2	1	0	5	2	3	0	0	0	4	0	1	0	0	2
Independence....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Morris..........	1	0	3	1	0	7	0	0	0	1	0	2	0	0	0
Morton..........	0	0	0	0	0	1	0	0	0	0	0	3	0	0	1
Nemaha..........	0	0	1	14	0	2	1	0	0	0	0	0	1	1	1
Neosho, except.....	1	1	0	17	0	17	11	0	0	0	0	1	0	0	0
Chanute..........	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ness..........	0	0	3	0	0	1	0	0	0	1	0	0	0	0	0
Norton..........	2	0	0	0	0	2	0	0	6	0	0	0	0	0	0
Osage..........	0	0	0	0	0	4	0	0	0	2	1	2	0	0	4
Osborne..........	0	0	3	0	5	0	1	0	11	0	1	0	0	0	0
Ottawa..........	0	0	1	0	1	1	0	0	0	0	0	0	0	1	0
Pawnee..........	0	0	0	0	0	15	0	0	0	2	0	1	0	0	1
Phillips..........	0	0	0	1	0	2	0	0	0	4	0	1	0	0	0
Pottawatomie......	1	0	0	0	0	15	18	0	0	0	0	1	0	0	0
Pratt..........	1	1	0	0	0	39	1	0	4	2	0	0	0	0	2
Rawlins..........	0	0	0	3	0	2	0	0	0	0	0	2	0	0	0
Reno, except.......	0	1	4	1	0	13	0	0	0	3	0	3	0	0	0
Hutchinson......	5	0	4	19	0	3	1	1	1	3	0	2	0	0	9
Republic..........	0	0	3	0	2	5	0	0	4	1	0	0	0	0	1
Rice..........	0	0	6	4	0	10	0	0	0	6	3	1	0	0	0
Riley, except.......	1	0	17	2	0	2	26	0	0	1	0	4	0	0	1
Manhattan......	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rooks..........	1	0	0	0	0	4	1	0	0	0	0	0	0	0	0
Rush..........	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Russell..........	1	0	0	0	0	4	1	0	0	3	0	0	0	0	0
Saline, except......	2	1	1	18	2	18	6	0	3	8	0	1	0	0	0
Salina..........	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0
Scott..........	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sedgwick, except...	1	0	0	4	0	7	0	0	0	0	0	1	0	0	0
Wichita..........	15	1	3	54	2	38	6	1	1	18	1	13	0	0	26
Seward..........	0	0	0	0	0	6	0	0	0	1	0	0	0	0	1
Shawnee, except....	18	1	0	0	0	3	31	0	0	0	0	1	0	0	4
Topeka..........	11	1	0	13	2	34	457	0	2	4	6	4	0	0	23
Sheridan..........	0	0	0	1	0	15	13	0	0	1	0	0	0	0	0
Sherman..........	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0
Smith..........	0	1	0	0	0	1	1	0	3	4	0	0	0	0	1
Stafford..........	3	0	2	0	0	8	2	0	0	4	0	0	1	0	0
Stanton..........	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0
Stevens..........	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Sumner, except.....	0	1	1	28	0	20	2	0	1	17	0	0	0	0	0
Wellington......	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Thomas*..........	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Trego..........	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0
Wabaunsee........	0	0	0	4	0	9	14	0	0	0	1	0	0	0	0
Wallace..........	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0
Washington........	0	0	0	1	0	5	2	0	0	0	0	2	0	0	0
Wichita..........	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wilson..........	1	0	18	24	0	14	91	0	0	1	0	1	0	0	1
Woodson..........	2	0	0	0	0	11	0	0	0	1	0	0	0	0	0
Wyandotte, except..	0	0	0	10	1	0	0	0	0	1	0	1	0	0	0
Kansas City....	16	6	13	52	4	9	3	0	3	19	0	14	1	1	61
Rosedale........	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

* No report.

Other communicable diseases: Cancer, 18; chancroid, 5; erysipelas, 6; gonorrhœa, 125; syphilis, 52; trachoma, 2.

Food Analysis LXXI, to October 1, 1920.

E. H. S. Bailey, *Director.* W. S. Long, *Chemist in Charge.*

BEVERAGES.

1312. Corn Whisky. From the health officer, Dodge City. Alcohol, 34.6 per cent. Illegal.
1313. Corn Whisky. From the health officer, Dodge City. Alcohol, 34.5 per cent. Illegal.
1314*a*. Strawberry Pop. From the deputy state inspector, Kansas City. Passed.
1314*b*. Strawberry Pop. From the deputy state inspector, Kansas City. Passed.
1314*b*. Beverage. Label, "Mikey." From the deputy state inspector, Kansas City. Saccharin present. Illegal.
22767. Wine. Garrett & Co., Inc., New York City. Passed.
22846. Apple Juice. National Grape Juice Co., Brocton, N. Y. Poehler Merc. Co., Topeka. Passed.
22855*a*. Beer. Attorney-general's office, Topeka. Alcohol, 3.17 per cent. Passed.
22855*b*. Beer. Attorney-general's office, Topeka. Alcohol, 3.17 per cent. Passed.
22869. Beverage. From office of State Board of Health. Examined for tin. 39 mgs. per kilo. Passed.
50307. Grape Soda. Manhattan Bottling Works, Manhattan. Passed.
50308. Lemon Sour Soda. Manhattan Bottling Works, Manhattan. Passed.
50317. Lemon Sour Pop. Allen Bottling Co., Wichita. Passed.
81343. Green River Pop. Coco-Cola Bottling Co., Pittsburg. Passed.
81344. Orange Crush Pop. Coco-Cola Bottling Co., Pittsburg.
81345. Peach Pop. Coco-Cola Bottling Co., Pittsburg. Saccharin present. Illegal.
81346. Lemon Sour Pop. Pittsburg Steam Bottling Co., Pittsburg. Saccharin present. Illegal.
81347. Cherry Coke. Pittsburg Steam Bottling Co., Pittsburg. Passed.
81348. Root Beer. Pittsburg Steam Bottling Co., Pittsburg. Saccharin present. Illegal.
81358. Lemon Sour Pop. H. A. Roselli, Girard. Saccharin present. Illegal.
81359. Cream Soda. H. A. Roselli, Girard. Saccharin present. Illegal.
81360. Orange Soda. H. A. Roselli, Girard. Saccharin present. Illegal.
81361. Lemon Sour. J. F. Makinney, Columbus. Saccharin present. Illegal.
81362. Strawberry Pop. J. F. Makinney, Columbus. Saccharin present. Illegal.
93318. Beverage, "Vinol," a dilute hard cider. National Beverage Co., St. Louis. Sol Hoffins, Murdock. Illegal.

ICE CREAM.

1307. Ice Cream. Beatrice Creamery Co., Topeka. Passed.
1308. Ice Cream. Chocolate. Farmers' Creamery Co., Topeka. Passed.
1309. Ice Cream. Scott Bros., Topeka. Fat, 13.5 per cent.
1310. Ice Cream. Chocolate. Topeka Pure Milk Co., Topeka. Fat, 12 per cent. Illegal.
1311. Ice Cream. Chocolate. Baughman Bros., Topeka. Passed.
1317. Ice Cream. From Newton. Unofficial. Fat, 6 per cent. Passed.
1332. Ice Cream. Lawrence. Unofficial. Passed.
1246. Ice Cream. Lawrence. Unofficial. Passed.
1247. Ice Cream. Lawrence. Unofficial. Fat, 9 per cent. Illegal.
1248. Ice Cream. Lawrence. Unofficial. Passed.
1249. Ice Cream. Lawrence. Unofficial. Passed.
1250. Ice Cream. Lawrence. Unofficial. Fat, 11.3 per cent. Illegal.
1251. Ice Cream. Lawrence. Unofficial. Passed.
1252. Ice Cream. Lawrence. Unofficial. Fat, 11.2 per cent. Illegal.
1253. Ice Cream. Lawrence. Unofficial. Fat, 11.8 per cent. Illegal.
1326. Ice Cream. Lawrence. Unofficial. Passed.
22839. Ice Cream. No information. Fat, 5.8 per cent. Illegal.
22840. Ice Cream. No information. Fat, 8.6 per cent. Illegal.
50329. Ice Cream. Marion Creamery Co., Marion. Retailer, Sandberg Creamery Co., Marion. Passed.
50330. Ice Cream. Marion Creamery Co., Marion. Passed.
50331. Ice Cream. Turkish Candy Co., Emporia. Passed.
50332. Ice Cream. Turkish Candy Co., Emporia. Passed.
50333. Ice Cream. Turkish Candy Co., Emporia. Passed.
50334. Ice Cream. Emporia Creamery Co., Emporia. Fat, 13.5 per cent.
50335. Ice Cream. Ottawa Condensing Co., Ottawa. Fat, 10 per cent. Illegal.
50336. Ice Cream. Ottawa Condensing Co., Ottawa. Fat, 10.5 per cent. Illegal.
50337. Ice Cream. Ottawa Condensing Co., Ottawa. Fat, 10.5 per cent. Illegal.
50338. Ice Cream. Ottawa Condensing Co., Ottawa. Fat, 10 per cent. Illegal.
50339. Ice Cream. Ottawa Condensing Co., Ottawa. Fat, 10.3 per cent. Illegal.
50340. Ice Cream. R. L. Howard, Osawatomie. Retailer, R. L. Howard. Fat, 11.5 per cent. Illegal.
50341. Ice Cream. R. L. Howard, Osawatomie. Retailer, F. B. Miller, Osawatomie. Passed.
50342. Ice Cream. Moses Wright, Osawatomie. Fat, 4.8 per cent. Illegal.
50343. Ice Cream. A. Morrison, jr., Farm Co., Paola. Fat, 12 per cent. Illegal.
50344. Ice Cream. J. A. Morrison, jr., Farm Co., Paola. Fat, 12 per cent. Illegal.
50345. Ice Cream. J. E. Welch, Garnett. Fat, 13 per cent.

50346. Ice Cream. Garnett Creamery Co., Garnett. Fat, 13 per cent.
50347. Ice Cream. Garnett Creamery Co., Garnett. Fat, 10.5 per cent. Illegal.
50348. Ice Cream. J. E. Welch, Garnett. Fat, 13 per cent.
50349. Ice Cream. Kaw Valley Creamery Co., Lawrence. Fat, 13 per cent.
50350. Ice Cream. Kaw Valley Creamery Co., Lawrence. Fat, 10 per cent. Illegal.
50351. Ice Cream. Lawrence Sanitary Milk Co., Lawrence. Passed.
50352. Ice Cream. Lawrence Sanitary Milk Co., Lawrence. Passed.
50355. Ice Cream. R. L. Howard, Osawatomie. Fat, 9.6 per cent. Illegal.
73005. Ice Cream. M. G. Economy, Kansas City. Passed.
73006. Ice Cream. Meyers Sanitary Milk Co., Kansas City. Passed.
73007. Ice Cream. Meyers Sanitary Milk Co., Kansas City. Fat, 12.8 per cent. Illegal.
73008. Ice Cream. E. G. Atwood Ice Cream Co., Kansas City. Fat, 9.5 per cent. Illegal.
73009. Ice Cream. DeCoursey Creamery Co., Kansas City. Fat, 12.5 per cent. Illegal.
73010. Ice Cream. DeCoursey Creamery Co., Kansas City. Fat, 12 per cent. Illegal.
73011. Ice Cream. H. C. Panatt and E. N. Ganter, Atchison. Passed.
73012. Ice Cream. Deer Creek Creamery Co., Atchison. Fat, 11.5 per cent. Illegal.
73013. Ice Cream. Deer Creek Creamery Co., Atchison. Fat, 11.5 per cent. Illegal.
73014. Ice Cream. Atchison Candy Kitchen, Atchison. Passed.
73015. Ice Cream. Geo. Sipe, Hiawatha. Passed.
73016. Ice Cream. Frank Kamp, Hiawatha. Fat, 12 per cent. Illegal.
73017. Ice Cream. T. J. Pace, Sabetha. Passed.
73018. Ice Cream. Kreitzer Bros. Sabetha. Passed.
73019. Ice Cream. J. S. Krotzinger, Seneca. Passed.
73020. Ice Cream. Marysville Ice Co., Marysville. Fat, 11.5 per cent. Illegal.
73021. Ice Cream. James Ware, Marysville. Fat, 11 per cent. Illegal.
73022. Ice Cream. C. H. Smith, Frankfort. Retailer, Van Bibber & Berkley, Drugs Frankfort. 12.5 per cent. Illegal.
73023. Ice Cream. Concordia Creamery Co., Concordia. Fat, 12 per cent. Illegal.
73024. Ice Cream. Beatrice Creamery Co., Concordia. Fat, 13 per cent.
73025. Ice Cream. T. M. Frakes & Wm. Clark, Concordia. Fat, 11 per cent. Illegal.
73026. Ice Cream. Chappel & Ambrose, Norton. Passed.
73027. Ice Cream. H. L. Wilson, Belleville Ice Co., Belleville. Passed.
73028. Ice Cream. A. E. Brown, Washington. Fat, 12.5 per cent. Illegal.
93415. Ice Cream. The Steffen-Bretch Ice and Ice Cream Co., Wichita. Fat, 10.5 per cent. Illegal.
93416. Ice Cream. The Steffen-Bretch Ice and Ice Cream Co., Wichita. Fat, 11 per cent. Illegal.
93425. Ice Cream. Zipp Butter and Ice Cream Co., Wichita. Fat, 13 per cent.
93426. Ice Cream. Zipp Butter and Ice Cream Co., Wichita. Fat, 13 per cent.
93428. Ice Cream. Wm. Mikes, Wichita. Passed.
93438. Ice Cream. Purity Candy Kitchen, Arkansas City. Passed.
93439. Ice Cream. Purity Candy Kitchen, Arkansas City. Passed.
93440. Ice Cream. R. F. Finney, Arkansas City. Passed.
93441. Ice Cream. R. F. Finney, Arkansas City. Fat, 12.5 per cent. Illegal.
93442. Ice Cream. A. C. Dairy Products Co., Arkansas City. Passed.
93443. Ice Cream. A. C. Dairy Products Co., Arkansas City. Passed.
93449. Ice Cream. Kingman Ice and Creamery Co., Kingman. Passed.
93450. Ice Cream. Kingman Ice & Creamery Co., Kingman. Passed.
93451. Ice Cream. Kaufman Creamery Co., Pratt. Passed.
93452. Ice Cream. Kaufman Creamery Co., Pratt. Passed.
93453. Ice Cream. Cloverdale Dairy, Hutchinson. Passed.
93454. Ice Cream. Palace of Sweets, Hutchinson. Fat, 13.
93455. Ice Cream. Palace of Sweets, Hutchinson. Fat, 10.5 per cent. Illegal.
93456. Ice Cream. Demos & Castle, Hutchinson. Fat, 10.5 per cent. Illegal.
93457. Ice Cream. Demos & Castle, Hutchinson. Fat, 7 per cent. Illegal.
93458. Ice Cream. Cal. Candy Co., Hutchinson. Fat, 10 per cent. Illegal.
93459. Ice Cream. Jackson Ice Cream, Hutchinson. Passed.
93460. Ice Cream. Jackson Ice Cream, Hutchinson. Fat, 13.5 per cent.
93461. Ice Cream. Mixture. Jackson Ice Cream, Hutchinson. Passed.
93462. Ice Cream. Snow Flake Ice Cream Co., Hutchinson. Passed.
93463. Ice Cream. Snow Flake Ice Cream Co., Hutchinson. Fat, 13.5 per cent.
93480. Ice Cream. The Zipp Butter and Ice Cream Co., Wichita. Passed.
93481. Ice Cream. The Zipp Butter and Ice Cream Co., Wichita. Passed.
93482. Ice Cream. The Snyder Ice Cream Co., Wichita. Passed.
93483. Ice Cream, Strawberry. The Snyder Ice Cream Co., Wichita. Passed.
93486. Ice Cream. The Steffens-Brecht Ice and Ice Cream Co., Wichita. Fat, 10 per cent. Illegal.

EVAPORATED MILK.

22844. Evaporated Milk. Helvetia Milk Condensing Co., Highland. Passed.
22847. Evaporated Milk. Libby, McNeill & Libby, Chicago. Theo. Poehler Mercantile Co., Topeka. Passed.
22848. Evaporated Milk. Carnation Milk Products Co., Chicago. Theo. Poehler Mercantile Co., Topeka. Passed.
22849. Evaporated Milk. Borden Condensed Milk Co., New York. Theo. Poehler Mercantile Co., Topeka. Passed.
22850. Hebe. The Hebe Co., Chicago. The Theo. Poehler Mercantile Co., Topeka. Passed.
22851. En-ZO. The Enzo Co., Denmark, Wis. Theo. Poehler Mercantile Co., Topeka. Passed.
22852. Condensed Milk. The Borden Co., New York. Theo. Poehler Mercantile Co., Topeka. Passed.

MILK.

274. Milk. Farmers' Creamery Co., Topeka. From city food department, Topeka. Passed.
1327. Milk. Harrison's Depot, Topeka. From city food department, Topeka. Passed.
1328. Milk. Harrison's Depot, Topeka. From city food department, Topeka. Passed.
50259. Milk. Olathe Creamery, Olathe. L. W. Snapp & Co., Olathe. Passed.
50260. Milk. Olathe Creamery Co., Olathe. Retailer, Carroll Drug Co., Olathe. Passed.
50261. Milk. D. R. Ott, Olathe. Nonfat solids, 8.09 per cent. Illegal.
50262. Milk. D. R. Ott, Olathe. Passed.
50263. Milk. H. C. Knowling, Olathe. Passed.
50264. Milk. Guy Pelham, Olathe. Passed.
50265. Milk. Olathe Creamery, Olathe. Passed.
50266. Milk. Olathe Creamery, Olathe. Nonfat solids, 8.29 per cent. Illegal.
50267. Milk. D. R. Ott, Topeka. Passed.
50268. Milk. D. R. Ott, Topeka. Passed.
50269. Milk. Olathe Creamery Co., Olathe. Passed.
50270. Milk. N. T. Perry, Lawrence. Passed.
93411. Milk. F. Hartig, Wolcott. Loma Vista Dairy, Kansas City. Passed.
93412. Milk. F. Hartig, Wolcott. Loma Vista Dairy, Kansas City. Passed.
93413. Milk. F. Hartig, Wolcott. Loma Vista Dairy, Kansas City. Fat, 2.6 per cent; nonfat solids, 8.7 per cent. Illegal.
83414. Milk. H. Hartig, Wolcott. Loma Vista Dairy, Kansas City. Nonfat solids, 8 per cent. Illegal.

MISCELLANEOUS.

261. Salmon. Copper River Packing Co., Seattle, Wash. L. D. Roose, Topeka. Passed.
270. Shortening. Whittelsey Merc. Co., Topeka. Passed.
271. Butter. Sent from the city laboratory, Topeka. Passed.
274. Pork and Beans. Ridenour-Baker Groc. Co., Kansas City, Mo. E. Belts, Topeka. Passed.
1239. Lemon Extract. Steinwander-Stoffregen Coffee Co., St. Louis, Mo. Alcohol, 73.6 per cent. Unofficial. Illegal.
1324. Alcohol. Taken by police, Lawrence. An alcoholic solution of compounds of antimony and mercury.
22770. Gelatin. W. B. Wood, St. Louis, Mo. Purity Ice Cream Co., Iola. Passed.
22820. Chewing Gum. From Ford, Kan. Said to have caused illness. Passed.
22821. Ice Cream Improver. Information not given. Mainly starch, with some pepsin.
22822. Olives. Blue Seal Brand California Ripe Olives. American Olive Co., Los Angeles, Cal. Passed.
22841. Black Raspberries. Heinly & Kanoff, Topeka. Can swollen, but contents sterile. Illegal.
22842. Black Raspberries. Heinly & Kanoff, Topeka. Passed.
22843. Ripe Olives. Gregg Olive Co., Phœnix, Ariz. Santa Fe Railroad Co., Topeka. Passed.
22845. Colored Cocoanut. No information supplied. Color, tartrazine. Passed.
50252. English Walnuts. H. D. Lee Merc. Co., Salina. The Mercantile Co., Chapman. Passed.
50253. Cream Candy. H. D. Lee Merc. Co., Salina. Bon Ton Confectionery, Chapman. Passed.
50254. Marshmallows. Douglas Candy Co., St. Joseph, Mo. Bon Ton Confectionery, Chapman. Passed.
50255. Chocolates. United Drug Co., Boston, Mass. V. L. DeTour, Minneapolis. Passed.
50256. Chocolates. United Drug Co., Boston, Mass. V. L. DeTour, Minneapolis. Passed.
50257. Chocolates. United Drug Co., Boston, Mass. V. L. DeTour, Minneapolis. Passed.
50357-*a*. Cocoanut Oil. American Cocoanut Butter Co., Chicago. R. L. Howard, Osawatomie. Passed.
72092. Table Syrup. Poehler Merc. Co., Topeka. E. L. Vine, Holton. Passed.
93316. Comac Cooking Compound. The Comac Co., Minneapolis, Minn. Godown & Son, Kingman. Mainly starchy material.
93378. Syrup. Farrell & Co., Omaha, Neb. F. E. Grocery Co., Wichita. Passed.
93379. Cane and Maple Syrup. Farrell & Co., Omaha, Neb. F. & E. Grocery Co., Wichita. Passed.
93380. White Syrup. Farrell & Co., Omaha, Neb. F. & E. Grocery Co., Wichita. Passed.
93381. Corn Syrup. Farrell & Co., Omaha, Neb. F. & E. Grocery Co., Wichita. Passed.
93382. Soup. Wittenberg-King Co., Portland, Ore. Passed.
93447. Cream. D. G. Miller, Wichita. Passed.
93448. Cream. E. D. Sudwig, Wichita. Passed.

Report of Division of Water and Sewage.

NOVEMBER, 1920.

ALBERT H. JEWELL, Chief.

Permits issued or refused for Waterworks and Sewerage.

Date.	*Place.*	*Nature of improvement.*
Nov. 15	Caney	Water filtration.
Nov. 17	Ellis	Waterworks improvement.
Nov. 1	Galena	Waterworks improvement.
Nov. 16	Glasco	Sewer extensions.

Final Inspections on Completed Work.

Nov. 16	Colby	Sewer system.
Nov. 18	Protection	Sewers and sewage disposal.
Nov. 20	Valley Center	Waterworks.

Plans or preliminary reports have been received or conferences have been held with municipal authorities for new work at the following places:

Clay Center	Water filtration and softening plant.
Emporia	Water improvements.
Haven	School building sewage disposal.
Manhattan	Water-softening plant.
Osawatomie	Extensions to sewer system.
Ottawa	Water-purification plant.
Topeka	Water-filtration plant.
White Water	New water supply.

Venereal Disease Control a Most Important Health Problem.

It is a public-health axiom that when the cause of a disease, its mode of transmission and its method of control have been determined, the only remaining factors necessary to secure relief from that disease are money and intelligent human action. The truth of this axiom has been proved in the cases of typhoid fever, typhus fever, yellow fever, malaria, diphtheria, cholera, hookworm, smallpox, rabies and many other diseases.

We have had for sometime a fairly adequate supply of scientific information concerning the cause and the manner of the transmission of venereal diseases, also their rate of incidence and mortality, but not until recently have we had a constructive, workable program for their control that compared with that for the control of other important diseases.

Every state health department in the country, except one, has adopted this program and has recognized the control of venereal diseases as a public-health program of the first importance. Since the war there has been no let-up of activity on the part of health and social-hygiene agencies to institute the measures found effective in controlling these infections. They have realized that venereal disease is a greater problem in time of peace than during war. Army records show that where one case of the disease was contracted after entering the army, five were brought in by the draft from the civilian population.

Much has already been accomplished in the execution of this program in this state, but its present activities cannot continue without liberal financial support. Since the Federal appropriation for this work in 1921 has been curtailed to about half of what it was in 1920, it is necessary that the state make up this deficit. This is imperative in order that the effective start that has been made will not suffer.

By the responses that the people of this state have made at all times to the work of controlling venereal diseases, they have said:

> "Longer endurance of the silence that has fostered the spread of venereal disease has become intolerable. Secrecy is to be no longer a justifiable cloak for covering up the conditions that spread the diseases which cause so much suffering to humanity, to the innocent as well as the guilty; that as citizens of the state we are convinced that such an enemy to the human race, aimed, as it is, at the very heart of the present social order—the family and the home—calls for a fight in the open and with all the forces that an enlightened community can command."

Preparing Standards for Ratproof Houses.

(Issued by the U. S. Public Health Service.)

Plans for radical changes in the construction of business buildings, dwellings and wharves are being drawn up by the United States Public Health Service as part of a nation-wide campaign for rat extermination.

Health officers from various states and the larger cities, at a conference in Galveston and Beaumont, Texas, to study bubonic plague and rat extermination, recommended to Surgeon General Hugh S. Cumming that standard specifications for ratproof buildings be drawn up by the Public Health Service. These are to be furnished to the different states and cities in order that they may be incorporated in the building codes throughout the country.

"While bubonic plague is under control of this country, there will always be scattered infection until the rat can be exterminated," said Surgeon General Cumming. "The most effective measure is permanent ratproofing of all buildings. Plans for this may easily be incorporated in any new construction. While the Public Health Service can concern itself directly only with the problem of plague prevention, there is an important economic problem that enters into this situation, due to the fact that at the present time, according to authoritative estimates, there is one rat for every one person in the United States. To maintain this huge number of rats costs the people of this country approximately one cent per person every day for rat food, an intolerable and unnecessary burden for the people to carry."

1. Live cleanly. Live your best and you will not be a victim of vice. Many degenerative diseases are due to infections from bacteria. Exercise, care of the teeth and gums, the prevention of constipation by proper food are great helpers to avoid disease.
2. Keep serene. Live simply.
3. These are not rules for playing safe. We must always dare and do—strive, work, play, love, learn, intensely. Vivid enjoyment of each day, giving up everything and relaxing each night. That is the way to keep young.—*How to Live.*

Report of Laboratory for December, 1920.

TOPEKA, KAN., January 12, 1921.

MEMORANDUM.

To: Secretary of State Board of Health.
From: Public Health Laboratory.
Subject: Report of work done by the Laboratory for the month of December, 1920.

	December.	*November.*
1. Complement fixation test for syphilis:		
Blood specimens—		
From physicians:		
Positive	86	63
Negative	303	252
Doubtful	19	25
Unsatisfactory	37	29
Totals	445	369
From Lansing:		
Positive	9	19
Negative	36	44
Doubtful	3	18
Unsatisfactory	9	8
Totals	57	89
Spinal fluid—		
Positive	0	0
Negative	5	7
Doubtful	2	0
Totals	7	7
2. Examination of sputum for tuberculosis:		
Positive	28	29
Negative	89	83
Unsatisfactory	5	6
Totals	122	118
3. Exmaination of cultures for diphtheria:		
Positive	114	489
Negative	1,244	1,817
No growth	224	248
Unsatisfactory	5	10
Totals	1,587	2,514
4. Examination of smears for gonococcus:		
From physicians:		
Positive	5	25
Negative	22	3
Unsatisfactory	3	3
Totals	30	31
From Lansing:		
Positive	7	25
Negative	102	144
Unsatisfactory	8	3
Totals	117	172
5. Examination of widals for typhoid fever:		
Positive	10	14
Negative	4	6
Unsatisfactory	6	7
Totals	20	27
6. Examination of stool cultures for typhoid fever:		
Positive	0	1
Negative	12	12
Unsatisfactory	1	2
Totals	13	15

7. Miscellaneous examinations:		
Urine for tuberculosis	6	....
Meningitis culture	2	....
Smear from eye	1	....
Gland secretion	1	....
Blood culture	1	....
Empyema culture	1	....
Dog's head	1	....
Preparation for spirocheta pallida	2	....
Totals	15	8
Grand totals	2,413	3,356

Report of Division of Water and Sewage.

DECEMBER, 1920.

Permits issued or refused for Waterworks and Sewerage.

Date.	*Place.*	*Nature of Improvement.*
Dec. 14	Haven schoolhouse	Sewage disposal.

Plans or preliminary reports have been received or conferences have been held with municipal authorities for new work at the following places:

Arkansas City	Sewerage.
Clay Center	Water filteration and softening plant.
Emporia	Water improvements.
McPherson	Water softening for municipal light and water plant.
Manhattan	Water-softening plant.
Osawatomie	Extensions to sewer system.
Ottawa	Water-purification plant.
Topeka	Water-filtration plant.
Whitewater	New water supply.
Wellington	Mausoleum.
Wichita	Mausoleum.

Record of analyses made in Water and Sewage Laaboratory at Lawrence during December, 1920:

	Bact.	*Chem.*
City supply	289	5
Bottled waters	1	..
Private supplies	54	1
Railroad supplies	6	..
Ice	2	..
Miscellaneous	..	5
Totals	352	11—363

Licenses Issued.

Date.	*Place.*	*Person or firm and purpose.*
Dec. 6	Belleville	Rock Island.
Dec. 6	Belleville	Union Pacific.
Dec. 6	Chanute	Santa Fe.
Dec. 6	Concordia	Santa Fe.
Dec. 12	Florence	Santa Fe.
Dec. 10	Goodland	Rock Island. Certificate refused.
Dec. 21	Harper	Santa Fe.
Dec. 21	Hiawatha	Grand Island.
Dec. 21	Hiawatha	Union Pacific.
Dec. 11	Holyrood	Santa Fe.
Dec. 6	Independence	Missouri Pacific. Certificate refused.
Dec. 6	Independence	Santa Fe. Certificate refused.
Dec. 6	Iola	Missouri, Kansas & Texas. Certificate refused.
Dec. 21	Kiowa	Santa Fe.
Dec. 6	Phillipsburg	Rock Island. Certificate refused.
Dec. 6	Pratt	Anthony & Northern.
Dec. 6	Pratt	Santa Fe.
Dec. 6	Pratt	Rock Island.
Dec. 6	Topeka	Santa Fe.

Food Analysis Report.

H. H. KING, Ph. D., Director of Laboratory, Manhattan.
ROBT. DEROSE, Analyst, Manhattan.

50353. Cake. From Central Bakery, Beloit. Manufacturer, Central Bakery, Beloit. Saccharin, trace.

50354. Cake. From Central Bakery, Beloit. Manufacturer, Central Bakery, Beloit. Saccharin, trace.

60770. Ice Cream. From Jennings Drug Co., Clay Center. Manufacturer, Franklin Ice Cream Co., Lincoln, Neb. Fat, 9.1 per cent. Illegal.

60770*a*. Ice Cream. From Jennings Drug Co., Clay Center. Manufacturer, Franklin Ice Cream Co., Lincoln, Neb. Fat, 9 per cent. Illegal.

60771. Ice Cream. From J. G. Bacakos, Clay Center. Manufacturer, Concordia Creamery, Concordia. Fat, 10.1 per cent. Illegal.

60771*a*. Ice Cream. From J. G. Bacakos, Clay Center. Manufacturer, Concordia Creamery, Concordia. Fat, 13.0 per cent. Illegal.

60772. Ice Cream. From J. G. Bacakos, Clay Center. Manufacturer, Concordia Creamery, Concordia. Fat, 16.2 per cent. Passed.

60772*a*. Ice Cream. From J. G. Bacakos, Clay Center. Manufacturer, Concordia Creamery, Concordia. Fat, 16.6 per cent. Passed.

60773. Ice Cream. From J. A. Hagberg. Clay Center. Manufacturer, Concordia Creamery, Concordia. Fat, 10.4 per cent. Illegal.

60773*a*. Ice Cream. From J. A. Hagberg, Clay Center. Manufacturer, Concordia Creamery, Concordia. Fat, 9.1 per cent. Illegal.

60774. Ice Cream. From Mosher Drug Co., Herington. Manufacturer, Herington Ice Co., Herington. Fat, 8.6 per cent. Illegal.

60774*a*. Ice Cream. From Mosher Drug Co., Herington. Manufacturer, Herington Ice Co., Herington. Fat, 9 per cent. Illegal.

60775. Ice Cream. From Louis Paul, Herington. Own make. Fat, 14.4 per cent. Passed.

60775*a*. Ice Cream. From Louis Paul, Herington. Own make. Fat, 13.5 per cent. Illegal.

60776. Ice Cream. From Hubbell Drug Co., McPherson. Manufacturer, Jackson Ice Cream Co., Hutchinson. Fat, 11.1 per cent.

60776*a*. Ice Cream. From Hubbell Drug Co., McPherson. Manufacturer, Jackson Ice Cream Co., Hutchinson. Broken in shipment.

60777. Ice Cream. From C. W. Engberg, McPherson. Manufacturer, McPherson Creamery, McPherson. Fat, 12 per cent. Illegal.

60777*a*. Ice Cream. From C. W. Engberg, McPherson. Manufacturer, McPherson Creamery, McPherson. Fat, 11.4 per cent. Illegal.

60778*a*. Ice Cream. From Annibal-Almen, McPherson. Own make. Fat, 12.3 per cent. Illegal.

60779. Cream. Manufacturer, Geo. Farmer, McPherson. Fat, 16.2 per cent.

60780. Cream. Manufacturer, A. J. Rark, McPherson. Fat, 27.6 per cent.

60781. Cream. Manufacturer, J. Crumpacner, McPherson. Fat, 23 per cent

60782. Cream. From J. P. Yowell, McPherson. Manufacturer, J. P. Yowell, McPherson. Fat, 24.2 per cent.

22847*a*. Evaporated Milk. From Theo. Poehler Mercantile Co., Topeka. Manufacturer, Libby, McNeill, Libby. Fat, 7.2 per cent.

22488*a*. Evaporated Milk. From Theo. Poehler Mercantile Co., Topeka. Manufacturer, Carnation Milk Co., Chicago. Fat, 8 per cent. Passed.

22489*a*. Evaporated Milk. From Theo. Poehler Mercantile Co., Topeka. Manufacturer, Borden Condensed Milk Co. Fat, 8 per cent. Passed.

22850*a*. Hebe. From Theo. Poehler Mercantile Co., Topeka. Manufacturer, Hebe Company, Chicago. Fat, 8 per cent. Total solids 25.22 per cent. Passed.

22851*a*. Enzo. From Theo. Poehler Mercantile Co., Topeka. Manufacturer, Enzo Company, Denmark, Wis. Fat, 6 per cent. Total solids, 23.78 per cent. Passed.

22828. Ice Cream. From R. L. Howard, Osawatomie. Manufacturer, R. L. Howard, Osawatomie. Fat, 9.2 per cent. Cocoanut oil present. Adulterated.

22844*a*. Evaporated Milk. From A. T. & S. F., Topeka. Manufacturer, Helvetia Milk Condensing Co., Highland, Ill. Fat, 7.2 per cent. Total solids, 23.2 per cent.

73029. Raw Milk. From G. W. Bradby, Atchison. Manufacturer, Deer Creek Creamery, Atchison. Fat, 3.3 per cent. Total solids, 13.17 per cent. Solids not fat, 9.87 per cent. Passed.

73030. Raw Milk. From Putnam & Marge, Atchison. Manufacturer, Deer Creek Creamery, Atchison. Fat, 3.3 per cent. Total solids, 13.17 per cent. Solids not fat, 9.40 per cent. Passed.

73031. Milk. From Frank Rizzo, Atchison. Manufacturer, McAdow Dairy, Atchison. Fat, 3.1 per cent. Total solids, 12.16 per cent. Solids not fat, 9.06 per cent. Illegal.

73032. Raw Milk. From Manno Bros., Atchison. Manufacturer, McAdow Dairy, Atchison. Fat, 2.9 per cent. Total solids, 11.65 per cent. Solids not fat, 8.75 per cent. Illegal.

73033. Milk. From Denger's Drug Store, Atchison. Manufacturer, Kloff Dairy, Atchison. Fat, 3.5 per cent; total solids, 13.52 per cent; solids not fat, 10.02 per cent. Passed.
73034. Milk. From Henry B. Behrens, Atchison. Manufacturer, Kloff Dairy, Atchison. Fat, 3.3 per cent; total solids, 12.33; solids not fat, 9.00 per cent. Passed.
81276. Milk. From J. M. Currigan, Parsons. Manufacturer, Scott Bros., Parsons. Sample broken.
81320. Ice Cream. From J. M. Currigan, Parsons. Manufacturer, J. M. Currigan, Parsons. Fat, 12.4 per cent. Illegal.
81321. Ice Cream. From J. E. Wilson, Parsons. Manufacturer, U. S. Dairy Co., Joplin, Mo. Fat, 6.0 per cent. Illegal.
81322. Ice Cream. From J. E. Wilson, Parsons. Manufacturer, U. S. Dairy Co., Joplin, Mo. Fat, 6.6 per cent. Illegal.
81323. Ice Cream. From T. Pappas, Parsons. Manufacturer, T. Pappas, Parsons. Fat. 8.4 per cent. Illegal.
81324. Ice Cream. From G. W. Pappas, Parsons. Manufacturer, G. W. Pappas, Parsons. Fat, 17.4 per cent. Passed.
81325. Ice Cream. From Ice Cream Depot, Coffeyville. Manufacturer, Ice Cream Depot, Coffeyville. Fat, 12.6 per cent. Illegal.
81326. Ice Cream. From Ice Cream Depot, Coffeyville. Manufacturer, Ice Cream Depot, Coffeyville. Fat, 11.8 per cent. Illegal.
81327. Ice Cream. From Jas. Papadikus, Coffeyville. Manufacturer, Jas. Papadikus, Coffeyville. Fat, 8.6 per cent. Illegal.
81328. Ice Cream. From Jas. Papadikus, Coffeyville. Manufacturer, Jas. Papadikus, Coffeyville. Fat, 13.4 per cent. Illegal.
81329. Ice Cream. From K. C. Conkoulis, Coffeyville. Manufacturer, K. C. Conkoulis, Coffeyville. Fat, 6.6 per cent. Illegal.
81330. Ice Cream. From Brooks Ice Cream Co., Coffeyville. Manufacturer, Brooks Ice Cream Co., Coffeyville. Fat, 10.6 per cent. Illegal.
81331. Ice Cream. From Brooks Ice Cream Co., Coffeyville. Manufacturer, Brooks Ice Cream Co., Coffeyville. Fat, 12.6 per cent. Illegal.
81332. Ice Cream. From Sanitary Ice Cream Co., Independence. Manufacturer, Sanitary Ice Cream Co., Independence. Broken in shipment.
81333. Ice Cream. From J. C. Jackson, Independence. Manufacturer, J. C. Jackson, Independence. Fat, 8.3 per cent. Illegal.
81334. Ice Cream. From Switzer & Gobel, Independence. Manufacturer, J. C. Jackson, Independence. Fat, 14.2 per cent. Illegal.
81335. Ice Cream. From Boonies Bros., Independence. Manufacturers, Boonies Bros., Independence. Fat, 12.08 per cent. Illegal.
81336. Ice Cream. From Bauer & Son, Cherryvale. Manufacturer, Bauer & Son, Cherryvale. Fat, 14.0 per cent. Passed.
81337. Ice Cream. From Bauer & Son, Cherryvale. Manufacturer, Bauer & Son, Cherryvale. Fat, 7.0 per cent. Illegal.
81338. Ice Cream. From F. C. Gaede, Fredonia. Manufacturer, F. C. Gaede, Fredonia. Fat, 9.0 per cent. Illegal.
81339. Ice Cream. From Jas. Patterson, Fredonia. Manufacturer, Jas. Patterson, Fredonia. Fat, 24.7 per cent. Passed.
81349. Ice Cream. From Pittsburg Ice Cream Co., Pittsburg. Fat, 3.8 per cent Illegal.
81350. Ice Cream. From Pittsburg Ice Cream Co., Pittsburg. Fat, 5.0 per cent. Illegal.
81351. Ice Cream. From Crawford Co. Creamery, Pittsburg. Manufacturer, Crawford Co. Creamery, Pittsburg. Fat, 13.5 per cent. Passed.
81352. Ice Cream. From Crawford Co. Creamery, Pittsburg. Manufacturer, Crawford Co. Creamery, Pittsburg. Fat, 9.3 per cent. Illegal.
81353. Ice Cream. From Guizeppe & Pappas, Pittsburg. Manufacturer Guizeppe & Pappas, Pittsburg. Fat, 15.8 per cent. Passed.
81354. Ice Cream. From Gus Condis, Pittsburg. Manufacturer, Gus Condis, Pittsburg. Fat, 15.2 per cent. Passed.
81355. Ice Cream. From A. Gerhardt, Girard. Manufacturer, A. Gerhardt, Girard. Fat, 14.2 per cent. Passed.
81356. Ice Cream. From H. A. Roselle, Girard. Manufacturer, H. A. Roselle, Girard. Fat, 9.5 per cent. Illegal.
81357. Ice Cream. From H. A. Roselle, Girard. Manufacturer, H. A. Roselle, Girard. Fat 12.6 per cent. Illegal.
81363. Ice Cream. From J. F. McKinney, Columbus. Manufacturer, J. F. McKinney, Columbus. Fat, 5.4 per cent. Illegal.
81364. Ice Cream. From J. F. McKinney, Columbus. Manufacturer, J. F. McKinney, Columbus. Fat, 12.2 per cent. Illegal.
81365. Ice Cream. From J. A. Baker, Chanute. Manufacturer, J. A. Baker, Chanute. Fat, 13.4 per cent. Illegal.
81366. Ice Cream. From J. A. Baker, Chanute. Manufacturer, J. A. Baker, Chanute. Fat, 12.6 per cent. Illegal.
81367. Ice Cream. From Pete Stanos, Chanute. Manufacturer, Pete Stanos, Chanute. Fat, 10.2 per cent. Illegal.
81368. Ice Cream. From Alexander & Co., Chanute. Manufacturer, Alexander & Co., Chanute. Fat, 7.2 per cent. Illegal.
81369. Ice Cream. From C. Citti, Chanute. Manufacturer, C. Citti, Chanute. Fat, 11.4 per cent. Illegal.
81370. Ice Cream. From C. Citti, Chanute. Manufacturer, C. Citti, Chanute. Fat, 8.2 per cent. Illegal.

81373. Ice Cream. From U. S. Dairy Co., Parsons. Manufacturer, U. S. Dairy Co., Joplin, Mo. Fat, 6.7 per cent. Illegal.

81374. Ice Cream. From U. S. Dairy Co., Parsons. Manufacturer, U. S. Dairy Co., Joplin, Mo. Fat, 6.6 per cent. Illegal.

81375. Ice Cream. From Theo. Pappas, Parsons. Manufacturer, T. Pappas, Parsons. Fat, 11.4 per cent. Illegal.

81376. Ice Cream. From Geo. Pappas, Parsons. Manufacturer, Geo. Pappas, Parsons. Fat, 17.4 per cent. Passed.

81377. Ice Cream. From J. M. Currigan, Parsons. Manufacturer, J. M. Currigan, Parsons. Fat, 12.66 per cent. Illegal.

81380. Milk. From Fred Sulmenberger, Parsons. Manufacturer, Fred Sulmenberger, Parsons. Fat, 3.1 per cent. Total solids, 12.83 per cent. Solids not fat, 9.73 per cent. Illegal.

81381. Milk. From Fred Sulmenberger, Parsons. Manufacturer, Fred Sulmenberger, Parsons. Fat, 5.2 per cent. Total solids, 14.18 per cent. Solids not fat, 8.98 per cent. Passed.

81382. Milk. From Charles Blackburn, Parsons. Manufacturer, Charles Blackburn, Parsons. Fat, 3.5 per cent. Total solids, 14.38 per cent. Solids not fat, 10.88 per cent. Passed.

81383. Milk. From Charles Blackburn, Parsons. Manufacturer, Charles Blackburn, Parsons. Fat, 4.3 per cent. Total solids, 13.47 per cent. Solids not fat, 9.17 per cent. Passed.

81384. Milk. From Charles Blackburn, Parsons. Manufacturer, Charles Blackburn, Parsons. Fat, 3.3 per cent. Total solids, 12.77 per cent. Solids not fat, 9.47 per cent. Passed.

81385. Milk. From Charles Blackburn, Parsons. Manufacturer, Charles Blackburn, Parsons. Fat, 4.3 per cent. Total solids, 12.68 per cent. Solids not fat, 8.38 per cent. Passed.

81386. Milk. From T. J. O'Conner, Parsons. Manufacturer, T. J. O'Conner, Parsons. Fat, 3.8 per cent. Total solids, 14.30 per cent. Solids not fat, 10.50 per cent. Passed.

81387. Milk. From T. J. O'Conner, Parsons. Manufacturer, T. J. O'Conner, Parsons. Fat, 3.1 per cent. Total solids, 12.97 per cent. Solids not fat, 9.87 per cent. Illegal.

81388. Milk. From J. H. Mosier, Parsons. Manufacturer, J. H. Mosier, Parsons. Fat, 3.8 per cent. Total solids, 13.66 per cent. Solids not fat, 9.86 per cent. Passed.

81389. Milk. From J. H. Mosier, Parsons. Manufacturer, J. H. Mosier, Parsons. Fat, 4.3 per cent. Total solids, 14.96 per cent. Solids not fat, 10.66 per cent. Passed.

81390. Milk. From C. H. Briscol, Parsons. Manufacturer, C. H. Briscol, Parsons. Fat, 5.2 per cent. Total solids, 14.89 per cent. Solids not fat, 9.69 per cent. Passed.

81391. Milk. From C. H. Briscol, Parsons. Manufacturer, C. H. Briscol, Parsons. Fat, 4.1 per cent. Total solids, 13.70 per cent. Solids not fat, 9.60 per cent. Passed.

93469. Ice Cream. From James Herren, Great Bend. Manufacturer, James Herren, Great Bend. Fat, 3 per cent. Illegal.

93464. Ice Cream. From Wm. Pauling, Great Bend. Manufacturer, Kinsley Ice Cream Co., Kinsley. Fat, 10.1 per cent. Illegal.

93465. Ice Cream. From Wm. Pauling, Great Bend. Manufacturer, Kinsley Ice Cream Co., Kinsley. Fat, 9.3 per cent. Illegal.

93466. Ice Cream. From Wm. Pauling, Great Bend. Manufacturer, Kinsley Ice Cream Co., Kinsley. Fat, 9.8 per cent. Illegal.

93467. Ice Cream. From Wm. Pauling, Great Bend. Manufacturer, Kinsley Ice Cream Co., Kinsley. Fat, 8.2 per cent. Illegal.

93468. Ice Cream. From J. B. Eaton, Great Bend. Manufacturer, Great Bend Ice Co., Great Bend. Fat, 7.7 per cent. Illegal.

93470. Ice Cream. From James Herren Gread Bend. Manufacturer, Grovier Produce Co., Great Bend. Fat, 6.8 per cent. Illegal.

93471. Ice Cream. From James Herren, Great Bend. Manufacturer, Grovier Produce Co., Great Bend. Fat, 7.7 per cent. Illegal.

93472. Ice Cream. Manufacturer, Newton Ice Cream Co., Newton. Fat, 16.3 per cent. Passed.

93473. Ice Cream. Manufacturer, Newton Ice Cream Co., Newton. Fat, 9.3 per cent. Passed.

93474. Ice Cream. Manufacturer, Newton Ice Cream Co., Newton. Fat, 10.4 per cent. Passed.

93475. Ice Cream. Manufacturer, Palace of Sweets, Newton. Fat, 12.1 per cent. Passed.

93476. Ice Cream. Manufacturer, Palace of Sweets, Newton. Fat, 13.4 per cent. Passed.

93477. Ice Cream. Manufacturer, Princess Confectionery, Newton. Fat, 9.4 per cent. Passed.

93478. Ice Cream. Manufacturer, Princess Confectionery, Newton. Fat, 9.8 per cent. Passed.

93479. Ice Cream. Manufacturer, Fred Harvey, Newton. Fat, 17.5 per cent. Passed.

93480*a*. Ice Cream. Manufacturer, Zipp Butter & Ice Cream Co., Wichita. Sample broken in shipment.

93481*a*. Ice Cream. Manufacturer, Zipp Butter & Ice Cream Co., Wichita. Sample broken in shipment.

93488. Hamburg Meat. From P. B. Diltz, Kansas City, Kan. Own make. Preserved with sodium sulphite. Adulterated.

93489. Weiners in Casing. From P. B. Diltz, Kansas City, Kan. Own make. Contains salt, sodium sulphite, sodium nitrate; casing used on weiners had trace of orange I color. Adulterated.

93490. A powder. From P. B. Diltz, Kansas City, Kan. Contains sodium carbonate, sodium sulphite and salt. Use illegal.

93491. Casing Brown Mixture. From P. B. Diltz, Kansas City, Kan. Manufacturer, B. Helles Co., Chicago. Color orange I dye; no preservative. Use illegal.

Infant and Maternal Mortality for September, October, November, 1920.

Infant Deaths. In September there were 3,691 births, with 210 deaths of children under one year. This gives an infant mortality rate of 56 per 1,000 live births. This is an exceedingly creditable showing. October shows 3,383 births, with 199 deaths under one year, or a rate of 58 per 1,000 live births. November shows 3,155 births, with 207 deaths under one year or a rate of 65 per 1,000 live births. If these rates should continue through the year, Kansas will bid fair to break all records. The infant mortality rate in Kansas for 1919 was 68.

Stillbirths. The stillbirth rate shows a slight decrease over that of 1919. Ninety-four babies were born dead in September, 80 in October, and 108 in November, or an average of 94 for each month. In 1919 1,254 babies were born dead, or an average of 104 for each of the twelve months.

Birth Mortality. Of the 210 children who died under one year of age in September, 113 died at birth. Of the 199 who died under one year in October, 137 died at birth. Of the 207 who died under one year in November, 138 died at birth. In other words, 63 per cent of the infant mortality for these three months was birth mortality, not including stillbirths. If we add deaths at births and stillbirths we have a total of 670 potential citizens lost to the state at birth. This is a subject of vital importance to the state and surely worth the expenditure of time and money. It will never be solved without the liberal expenditure of both.

Illegitimate Births. There were 17 illegitimate births reported in September, 20 in October, and 24 in December, or a total of 61 for the three months. Surely the rights of these unfortunate children should be protected by the passage of the paternity bill proposed by the Children's Code Commission.

Maternal Deaths. The need for serious attention to the conditions obtaining at childbirth are further illustrated by the high death rate of mothers at childbirth. In September, 5 mothers died of child-bed fever, otherwise called blood poisoning or puerperal septicæmia, 9 died of toxemia of pregnancy or uremic poisoning, and 5 from other accidents or diseases of pregnancy, or a total of 19.

In October, 5 mothers died of puerperal septicæmia, 4 of uremic poisoning, and 8 from other causes connected with childbirth, or a total of 17.

In November, 9 mothers died of puerperal septicæmia, 8 of uremic poisoning, and 6 from other causes, or a total of 23.

This makes 59 mothers who gave their lives in a total of 10,229 live births. This is a rate of 5.7 per 1,000 live births, which again is lower than that for the entire year of 1919, which was 6.7.

The fact remains that these deaths are now known to be almost entirely preventable. The state can prevent them any time it is willing to pay the price to educate its women for motherhood and provide them with adequate care at and before childbirth.

A CORRESPONDENCE COURSE IN THE HYGIENE OF CHILD BEARING.

Child bearing should be a normal experience without pain or danger. The first step toward making it so is to have every mother know how to bring up her daughter so they may be physically fit to bear children and also teach them, *before they become mothers*, how to care for themselves and their babies.

Every woman should realize that it is her duty to herself, to her children and to the world to be not only healthy but vigorous and strong. She should study how to get and keep health and vigor.

The Division of Child Hygiene has issued a set of twelve lessons in the Hygiene of Child Bearing which will be mailed to any address, free of cost, one each week for twelve weeks. With each lesson will be enclosed a return envelope which should be used to acknowledge the receipt of that particular lesson, and each individual taking the course is invited and urged to ask any questions or make any comments the lessons may suggest. The titles of the twelve lessons are as follows:

1. The Organs of Reproduction.
2. Menstruation.
3. Diseases and Disorders of the Organs of Reproduction.
4. Pregnancy; the Doctor and Nurse.
5. Pregnancy; the Beginning of Life.
6. The Hygiene of Pregnancy, Diet.
7. The Hygiene of Pregnancy, Exercise, Rest and Recreation.
8. The Hygiene of Pregnancy, Clothing and Nursery Equipment.
9. Care of the Person and Equipment for Confinement.
10. Disorders and Complications of Pregnancy.
11. Preparation for Confinement.
12. Confinement.

Dementia Præcox.

This condition called "dementia præcox" is serious indeed, and the prognosis can only be made, provided the case is studied patiently and carefully. Not a few cases of dementia præcox are diagnosed neurasthenia, or some other benign condition. When this mistake is made, the physician has done harm. There are many cases of this psychosis, especially incipient ones. There are thousands of potential præcox patients in civil life. It only needs some stress, strain, or new and heavy responsibility to develop these cases. Incipient dementia præcox is the cause of much crime, pauperism, and asocial conduct. The advice of the State Board of Health to all doctors is—Look out for dementia præcox patients who are supposed to be "only a little nervous."—*Indiana Bulletin.*

A THOUGHT FOR THE NEW YEAR.

JOHN GALSWORTHY entreats us not to "drag the hands of the world's clock backward" by our neglect of the health of mothers and babies. He says:

"How do things stand? Each year in this country about 100,000 babies die before they have come into the world; and out of the 800,000 born, about 90,000 die. Many mothers become permanently damaged in health by evil birth conditions. Many children grow up mentally or physically defective. One in four of the children in our elementary schools are not in a condition to benefit properly by their schooling. What sublime waste! Ten in a hundred of them suffer from malnutrition; thirty in the hundred have defective eyes; eighty in the hundred need dental treatment; twenty odd in the hundred have enlarged tonsils or adenoids. Many, perhaps most, of these deaths and defects are due to the avoidable ignorance, ill health, mitigable poverty, and other handicaps which dog poor mothers before and after a baby's birth. One doesn't know which to pity most—the mother or the babies. Fortunately, to help the one is to help the other. . . .

"There are many districts all over the country where there are no centers to come to; no help and instructions to be got, however desperately wanted. Verily this land of ours still goes like Rachel mourning for her children. Disease, hunger, deformity and death still hound our babes, and most of the hounding is avoidable. We must and shall revolt against the evil lot, which preventable ignorance, ill health and poverty bring on hundreds of thousand of children.

"It is time we had more pride. What right have we to the world 'civilized' till we give mothers and children a proper chance? This is but the Alpha of decency, the first step of progress.

"Into the twilight of the world are launched each year these myriads of tiny ships. Under a sky of cloud and stars they grope out to the great waters and the great winds—little sloops of life, on whose voyaging the future hangs, they go forth blind, feeling their way. Mothers, and you who will be mothers, and you who have missed motherhood, give them their chance."—*Mother and Child.*

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BULLETIN
OF THE
Kansas State Board of Health

Published Monthly at the Office of the Secretary of the Board. Topeka, Kan.

S. J. CRUMBINE, M. D., Editor.

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Choke the cough!

A nation's vitality comes first!

If at first it does not take, try, try again.

Protect the baby from indiscriminate kissing.

Give him air, he'll soon be well.—*Shakespeare.*

The monthly BULLETIN to any Kansan regularly upon request.

If mouth and nose secretions were red, wouldn't our hands be a sight!

The health car "Warren" is doing a fine work through personal touch with the people.

FOOLISHMENT.

There was a young lunger named Perkins,
Who had a great fondness for gherkins.
She went to a tea
And ate twenty-three,
Which pickled her internal workin's.
—*Poco Loco.*

Sorrowing over the mistakes of the past will not help in avoiding blunders of the future.

MORBIDITY REPORT FOR JANUARY, 1921.

COUNTIES AND CITIES.	Tuberculosis	Typhoid and Paratyphoid	Smallpox	Diphtheria	Influenza	Scarlet Fever	Measles (morbilli)	German Measles (rubella)	Whooping Cough	Chickenpox	Mumps	Pneumonia (acute) (all forms)	Meningitis (epidemic)	Poliomyelitis (epidemic)	Other Diseases (see Addenda)
THE STATE	380	33	757	514	70	905	1507	11	345	419	56	238	7	2	395
Allen, except	28	0	6	3	0	0	3	0	0	0	0	1	0	0	0
Iola	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Anderson	0	0	0	3	0	9	1	0	0	0	0	1	0	0	0
Atchison, except	1	0	0	0	0	3	0	0	0	0	0	2	0	0	0
Atchison city	0	0	0	5	0	1	0	0	0	0	0	0	0	0	0
Barber	0	0	0	1	0	5	0	0	1	0	1	2	0	0	3
Barton, except	0	1	4	4	0	5	0	0	0	0	0	2	0	0	0
Great Bend	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bourbon, except	0	1	15	4	0	3	1	0	0	1	0	1	0	0	0
Fort Scott	2	0	3	40	0	5	1	0	3	1	0	1	0	0	6
Brown	0	2	9	2	0	9	1	0	0	1	1	0	1	0	1
Butler, except	2	5	29	29	3	14	30	1	6	9	14	8	0	0	0
Augusta	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
El Dorado	0	0	0	0	0	0	0	0	0	0	0	0	0	0	59
Chase	0	0	0	0	0	1	4	0	0	1	0	3	0	0	0
Chautauqua	1	1	0	10	0	0	2	0	0	2	0	3	0	0	0
Cherokee, except	4	0	2	11	4	6	0	0	0	3	0	4	0	0	0
Galena	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cheyenne	0	0	0	0	0	0	11	0	0	0	0	0	0	0	0
Clark	2	0	0	0	0	0	1	0	0	1	0	0	0	0	0
Clay	0	0	0	2	1	6	28	0	6	4	0	1	0	0	0
Cloud except	4	1	53	6	2	9	0	0	6	8	0	7	0	0	1
Concordia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coffey	0	0	0	3	0	14	11	0	2	1	0	0	0	0	0
Comanche	0	0	0	1	0	2	0	0	0	0	0	0	0	0	0
Cowley, except	47	1	2	9	2	13	15	0	3	19	2	6	0	0	11
Arkansas City	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Winfield	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crawford, except	9	0	5	10	0	8	4	0	0	4	0	11	0	0	2
Pittsburg	0	0	3	6	0	3	0	0	0	1	0	0	0	0	3
Decatur	0	0	7	0	0	10	3	0	0	1	0	0	0	0	1
Dickinson	1	1	13	3	0	20	2	0	8	1	0	0	0	0	1
Doniphan	1	0	2	1	0	3	0	1	1	0	0	2	0	0	4
Douglas, except	5	0	0	1	0	1	6	0	0	2	0	2	0	0	0
Lawrence	17	0	2	2	0	2	1	0	0	0	0	0	0	0	6
Edwards	0	0	0	0	0	10	1	0	0	0	0	0	0	0	0
Elk	0	0	0	2	1	2	3	0	4	0	0	5	0	0	0
Ellis	1	0	0	8	1	3	11	0	3	6	0	3	0	0	3
Ellsworth	3	1	45	6	2	0	3	1	18	15	0	17	0	0	1
Finney	1	1	2	4	0	7	0	0	15	16	0	4	0	0	0
Ford, except	1	1	8	0	0	14	1	1	1	4	0	3	0	0	1
Dodge City	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Franklin, except	0	0	14	0	0	3	36	0	0	0	0	2	0	0	0
Ottawa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Geary, except	2	0	1	2	3	8	7	0	16	7	0	2	0	0	3
Junction City	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gove	0	0	0	0	0	9	12	0	1	7	0	0	0	0	0
Graham	0	0	12	0	0	4	2	0	0	0	0	5	0	0	0
Grant	0	0	1	0	2	1	0	0	0	0	0	0	0	0	0
Gray	0	0	40	0	1	6	2	0	5	7	0	1	0	0	1
Greeley	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0
Greenwood	2	1	0	5	1	8	4	0	0	0	0	5	0	0	0
Hamilton*	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Harper	0	0	1	2	1	4	0	0	4	1	2	4	0	0	2
Harvey, except	3	0	6	2	0	8	210	0	10	1	1	0	0	0	0
Newton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Haskell	0	0	12	0	0	0	0	0	0	0	0	0	0	0	0
Hodgeman	0	0	0	7	1	12	4	0	0	0	0	2	0	0	0
Jackson	1	0	0	0	3	5	15	4	0	0	0	0	0	0	0
Jefferson	0	0	0	0	1	0	48	0	0	2	0	10	0	0	1
Jewell	0	0	0	0	0	2	11	0	0	2	0	0	0	0	1
Johnson	1	0	0	1	1	6	3	0	0	0	0	2	0	0	0
Kearny	0	0	0	1	0	1	0	0	0	0	0	2	0	0	0
Kingman	0	0	0	0	0	3	3	0	0	0	0	3	0	0	0
Kiowa	0	1	0	1	0	16	0	0	0	0	0	0	0	0	0
Labette, except	1	1	6	0	0	4	0	0	2	5	0	0	0	0	0
Parsons	5	0	13	9	1	6	0	0	2	3	0	0	0	0	14
Lane	1	0	0	0	0	0	3	0	0	0	0	0	0	0	0
Leavenworth, except	0	0	4	6	0	6	3	0	0	1	0	4	0	0	1
Leavenworth city,	3	1	1	0	0	7	0	0	0	3	1	0	0	0	0

MORBIDITY REPORT FOR JANUARY, 1921—Concluded.

COUNTIES AND CITIES.	Tuberculosis....	Typhoid and Paratyphoid....	Smallpox........	Diphtheria......	Influenza........	Scarlet Fever.....	Measles (morbilli)......	German Measles (rubella)......	Whooping Cough.	Chickenpox......	Mumps..........	Pneumonia (acute) (all forms).....	Meningitis (epidemic).....	Poliomyelitis (epidemic.).....	Other Diseases (see Addenda)..
Lincoln	0	0	1	3	1	1	3	0	77	0	0	4	0	0	0
Linn	0	0	13	1	0	11	33	0	0	10	0	1	1	0	0
Logan	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Lyon, except	3	0	0	7	0	14	62	0	0	13	0	2	0	0	1
Emporia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Marion	10	0	3	7	0	20	6	0	4	0	0	2	0	0	0
Marshall	0	0	60	1	0	11	5	0	2	0	0	4	0	0	0
McPherson	9	2	3	0	0	14	16	0	1	3	0	0	0	0	3
Meade	0	0	0	0	0	22	0	0	0	16	0	0	0	0	1
Miami	5	0	7	7	0	1	14	0	1	4	0	1	0	0	2
Mitchell	0	0	3	0	0	5	2	0	5	0	0	1	0	0	0
Montgomery, except	56	0	2	24	2	14	7	0	0	8	5	1	0	0	8
Coffeyville	3	1	1	8	0	1	1	0	11	0	0	1	0	0	3
Independence	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Morris	1	0	0	0	1	13	2	0	0	0	0	2	0	0	0
Morton	1	0	2	0	0	0	0	0	0	0	0	0	0	0	1
Nemaha	1	0	0	8	2	3	1	0	0	0	0	2	0	0	0
Neosho, except	0	2	0	4	0	7	10	0	0	5	3	2	0	0	8
Chanute	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ness	0	0	1	0	0	3	0	0	0	0	0	0	0	0	0
Norton	0	0	5	1	0	0	1	0	4	2	0	0	0	0	0
Osage	2	0	7	1	0	0	4	0	0	1	0	2	0	0	2
Osborne	0	0	37	2	0	2	8	0	15	2	0	0	0	0	0
Ottawa	0	0	16	4	1	12	3	0	0	0	0	0	1	0	0
Pawnee	0	0	6	2	1	21	0	0	0	0	1	1	0	0	1
Phillips	0	0	4	0	0	7	0	0	0	0	0	0	0	0	0
Pottawatomie	1	0	0	5	0	5	9	0	0	0	0	0	0	0	0
Pratt	2	0	4	1	0	35	0	0	10	1	0	1	0	0	0
Rawlins	1	0	0	2	21	15	0	0	23	0	0	0	0	0	0
Reno, except	3	0	14	7	0	16	13	0	0	1	0	4	0	0	0
Hutchinson	2	0	9	11	0	15	16	3	0	14	1	0	1	0	2
Republic	0	0	14	2	1	9	3	0	10	6	0	2	0	0	1
Rice	29	0	16	6	0	22	0	0	2	7	0	3	0	0	0
Riley, except	0	0	6	0	1	5	19	0	0	20	1	1	0	0	2
Manhattan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rooks	0	0	8	1	0	8	5	0	0	0	0	0	0	0	0
Rush	1	0	17	1	1	4	41	0	6	0	0	0	0	0	2
Russell	1	0	10	0	0	0	20	0	24	11	0	0	0	0	0
Saline, except	1	0	0	0	0	4	0	0	0	1	0	1	0	0	0
Salina	3	0	6	12	0	6	123	0	0	9	0	0	0	0	4
Scott	0	0	2	0	0	0	0	0	2	0	0	0	0	0	0
Sedgwick, except	0	1	2	5	0	15	1	0	0	0	0	2	0	0	0
Wichita	10	2	18	70	0	55	7	0	9	54	3	15	1	0	145
Seward	1	0	2	3	0	29	0	0	0	0	0	0	0	0	1
Shawnee, except	4	0	0	1	0	13	41	0	0	0	0	3	0	0	1
Topeka	17	2	2	17	2	37	288	0	5	21	15	10	1	2	19
Sheridan	0	0	4	0	0	29	67	0	0	3	1	0	0	0	0
Sherman	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0
Smith	1	0	11	0	1	1	26	0	4	5	1	0	0	0	0
Stafford	0	0	7	1	3	15	0	0	1	1	0	0	0	0	0
Stanton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stevens	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Sumner, except	40	0	1	13	1	32	12	0	1	37	0	8	0	0	3
Wellington	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Thomas*	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Trego	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0
Wabaunsee	0	1	0	0	0	3	22	0	2	2	1	0	0	0	3
Wallace	0	0	52	0	0	0	1	0	0	0	0	0	0	0	0
Washington	0	0	3	2	0	13	6	0	0	0	0	1	0	0	0
Wichita	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wilson	2	1	22	2	0	3	93	0	1	6	0	3	1	0	1
Woodson	1	0	0	0	0	7	1	0	0	0	0	1	0	0	0
Wyandotte, except	0	0	2	9	0	3	0	0	0	1	0	1	0	0	1
Kansas City	20	1	13	51	0	17	7	0	7	12	2	24	0	0	54
Rosedale	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

* No report.

Other communicable diseases: Anthrax, 2; cancer, 15; chancroid, 12; erysipelas, 11; gonorrhœa, 219; lethargic encephalitis, 1; ophthalmia neonatorum, 2; septic sore throat, 3; syphilis, 123; trachoma, 7.

A Study of the Causes of Delinquency of Women Quarantined for Disease at the State Industrial Farm for Women.

By Darlene Doubleday Newby, Social investigator, Division of Venereal Disease, State Board of Health.

1. The State Industrial Farm for Women was established by the legislature of 1917 to care for women convicted of crime against the state. In August, 1917, the doors of the new institution were thrown open, and women prisoners, previously held at the State Penitentiary, were transferred to the new institution, with Mrs. Julia Perry in charge as superintendent. The Industrial Farm, though adjacent to the State Penitentiary, is a separate institution, under direct control of the State Board of Administration.

2. In the early months of the war the State Board of Health passed a regulation, based on state law, requiring the reporting of venereal disease. Later specific regulations were passed by the Board of Health requiring the quarantining of diseased persons. In extracantonment zones there were such large numbers of women requiring quarantining, that it was found necessary to call upon the state to provide quarters for them. Accordingly the State Board of Health in March, 1918, passed further regulations regarding the treatment of venereally diseased women, designating the place of quarantine to be either their homes, under certain conditions, or the State Industrial Farm. In a few weeks the population of the Farm had increased from 18 to more than 200 women.

3. The Farm became at once a duplex institution with two distinct kinds of inmates: the first and smaller group, those convicted of crimes against the state; the second and much larger group, those quarantined for treatment of venereal disease. The placing of the second group of women in the institution was a war emergency measure. The group was received kindly and graciously by the superintendent and her staff, although the crowding necessitated by their coming was a burden. Feeling on the part of the "state charges" for the incoming diseased women was not friendly. A number of state prisoners, though charged with serious crimes themselves, have a contempt for loose women, and in addition feel a physical fear in associating with diseased prostitutes.

4. Out of her wide experience in the care of sexually delinquent women, the superintendent at once evolved a plan to which she has constantly adhered as strictly as the institution's equipment allows. She arranged for a segregation, as complete as possible, of the two kinds of inmates. Grouping and regrouping was necessary. Some of the state charges, upon examination under the new regulation, were found to be diseased; some of the diseased women were coming in with such charges against them as "vagrancy," "prostitution," etc. It became increasingly difficult, therefore, to distinguish between state charges and internes. Nevertheless it was necessary, in fairness to both group, that some dstinction be made in planning for their care. State charges are subject to pardon and parole at the hands of the Board of Administration; sentences are relatively definite and of sufficient duration

so that in each separate case a study may be made and a special plan adopted looking towards the socializing of the individual. The release of the internes is under the control of the health officer in charge of quarantine; he must order release as soon as patients are found to be noninfectious. The average term of quarantine for medical treatment is not over 8 weeks (1918, 1919 and 1920). It is apparent that this short interval is inadequate for any deliberate and thorough case work such as is being attempted with state charges. Such "social rehabilitation" as the interne is to receive must be administered in large doses and speedily, for she does not tarry long. Therefore, one of the biggest problems which confronted the superintendent when the quarantine camp was added to the institution was the merging of the widely different programs which seemed adapted to the needs of the two distinct groups into one general policy for everyday use.

5. Meanwhile the population was growing by leaps and bounds. In 1918 the greatest influx was from the camp counties of Geary, Riley and Leavenworth. In these localities health officers were members of the United States Public Health Service, coöperating with the medical corps of the army and the State Board of Health. It was war time, and whenever the health and physical fitness of the army were at stake the greatest vigilance prevailed. Giddy young war brides who lingered around camp too long after their husbands went overseas, stupid prostitutes who were not clever enough to stay in hiding, likewise scores of wayward girls whose delinquencies could not be proved in court, were examined, and if found diseased were sent to the Farm for treatment. It was over the quarantining of this latter class of so-called "innocent young girls" that so much furor was raised, and is still being raised. Establishing the innocence of sexually promiscuous girls would be difficult. Their youth, however, does entitle them to first consideration in any plan designed to reclaim or reform. The superintendent, with this thought in mind, places the younger internes in the most favorable environment with respect to their close associates, offering them work fitted to their capacity and of a nature calculated to furnish the maximum training in some gainful occupation that might be followed after release.

Among the first internes were a number of girls who had at least a part of a high-school course, several who had taught school, a sprinkling who had earned a successful living in offices, stores and factories; bright-faced, jolly girls, who normally behaved decently, if a bit rowdily, but who in the crisis of war times lost their social balance, followed soldiers to camp, grew more reckless, and finally found their way to quarantine. There were several girls under twenty whose records of delinquency probably did not antedate their coming to the Farm more than one year; in other words, they were comparative beginners.

6. It is believed now that this influx of the seemingly normal girl into the ranks of the morally delinquent represented a temporary invasion for which war-time conditions were in a large measure responsible. It is not the purpose of this study to determine how much present-day society has been affected by the emotional upheaval, of which

the patriotic prostitute was a part and a symptom. However, it is known that some of the higher-type girls from the extracantonment zones, who were interned at the Farm during the war years, have since settled down to what appears to be straight living. It cannot be doubted that their residence at the Farm was a benefit to them. There they had time to "think it over," and plenty of opportunity to observe mature prostitutes, many of them ravaged with disease and wholly incapacitated for further useful living. One girl said that three months at the Farm had brought her to her senses. "If," she said, "I am to come to the condition in which I see these pitiful creatures, I'm through. It is too late for them, but I still have a chance." When she was released she reëntered high school; she will graduate in June, and plans to work her way through a small college in the East, where she has relatives. This girl is probably of the type of the 41 internes comprising the 20 per cent designated as of normal make-up out of the 206 patients examined and classified by Doctor Treadway in his survey of the State Industrial Farm in 1918. The type of girl just described, who can see herself in relation to her environment, who can reason a proposition through to its logical conclusion, and who will follow a course prescribed by herself because she believes it to be the proper one—such a girl was rare at the Farm in 1918, and I believe she is rarer to-day.

7. The visitor at the Farm in 1920 notes a change in the type of girl. Now there is a predominance of stupid-looking, listless girls, such as one sees in reformatories and in psychopathic wards of city hospitals. Without having at hand any recent notes of such statistical value as Doctor Treadway's report of 1918, I have no hesitancy in saying that I believe the average mentality of internes is lower now than during the war years. In other words, the impetus furnished by aggressive health officers in extracantonment zones, where many kinds of women known to be purveyors of disease were sent into quarantine, encouraged city and county health officers over the state to guard their own communities in a similar way. In quarantining diseased persons these health officers have brought to light many moral delinquents who have long been a menace to their communities. It has frequently been found that one of the prolific sources of infection is the subnormal, adolescent girl.

8. Of such are the present large number of girls at the Farm described above as stupid and listless-looking. Earlier these girls were the retarded children of the fourth and fifth grades, who baffled the teachers in schools where the ungraded room was missing; they were the misfits on the playground; some of them formed a part of the little procession that winds its way to the county courthouse and stands outside the door marked "Commissioner of the poor." They were all a part of the group which experts classify as dependent, defective or delinquent children. But no experts ever saw them. They probably grew up in one of our splendid Kansas communities that has no social problems. Some of them are cross-eyed, some of them have adenoids, some of them have been sex offenders since they were six years old. Parental care

was casual, school supervision was sporadic, liberty never clashed seriously with official authority until scandal broke loose; then medical authorities stepped in and quarantine ensued. Is it strange that the maladjusted child became in adolescense the outlaw and the outcast? The weak or the wayward girl of six, unobserved, unrestrained and untaught, has been allowed to go her way; at sixteen (sometimes younger) she becomes the purveyer of venereal disease; she is quarantined for treatment at the Industrial Farm for Women. At last Kansas has found a dumping ground for her unfit. Subnormal girls of adolescent age are so numerous at the Farm now that the superintendent says that they constitute her greatest problem.

9. Let it be not forgotten that these girls are sent to the Farm classified in only one respect—venereal disease. They have had no general physical examination. Not infrequently a girl just entering the Farm will require immediate dental care; sometimes a tonsillectomy; very often she is addicted to drugs. Women of varying degrees of mental inferiority are admitted to the Farm without having passed under the observation of a psychiatrist. For although legislation has been enacted in Kansas looking towards custodial care of the feeble-minded as well as of the insane, it has not become a part of popular court procedure; probate judges, in some instances, are loathe to burden the counties with "unnecessary expense." The line is sharply drawn between the dangerous lunatic who might cut his own throat and the feeble-minded prostitute who gives birth to a child every year. The lunatic is locked up; the promiscuous woman is allowed to roam the streets; if she be in a community where there is an active health officer she eventually finds her way to the Farm. It is a tardy policy that delays apprehending her while she pursues her vicious course practically unhindered, wrecking her health, and landing at last, a shattered piece of humanity, in the only institution in Kansas where a woman without friends and without funds may be treated for venereal diseases.

10. Special emphasis has been laid on two conspicuous types interned: the subnormal adolescent girl and the older feeble-minded prostitute. In addition there is a group of patients not definitely feeble-minded, belonging probably to what experts would classify as psychopathic personalities. Their behavior is variable; they are likely to be moody, sometimes unreasonable, but usually tractable. It is thought that many of these girls, especially the younger ones, would make gratifying progress at a training school where they could be given expert attention for a prolonged period.

11. Obviously, attempting anything constructive is a tremendous undertaking to accomplish in a few weeks of quarantine, when it is remembered that home, school, church and community have done little in all the previous years of the girls' lives. At the Farm the policy obtains of starting every girl in life anew. The superintendent calls the Farm the "Land of Beginning Again."

Courses in typewriting, shorthand, domestic science—including both sewing and cooking—are being offered. Much of the recreation is planned to meet the needs and to suit the tastes of growing girls. The older patients as well as the younger ones voluntarily join in the various activities. Daily hikes are taken the year round; the hills are explored for miles. Baseball games are arranged whenever eighteen girls are ready to play. Various games are played outdoors or in the mess hall, according to the season. Amateur dramatics and musicales occur at frequent intervals. Time is allowed from working hours for rehearsals; direction of the entertainments is in the hands of the girls themselves; they are given free rein for their talent and imagination in planning their entertainment. Once a week all inmates at the Farm are permitted to attend a motion-picture entertainment at "The Front."

PART II.

1. An effort has been made to obtain histories of 400 women and girls quarantined at the State Industrial Farm for Women in the years 1917, 1918, 1919 and 1920. The amount of information secured in these cases has varied considerably, depending largely on the permanency of residence of the individual. It has not been possible to follow the "wanderers" any great distance. It should be remembered that patients interned, unless it happens that they have been convicted of crime, are free at the expiration of their quarantine to go whither they please. When the time of release comes, a girl, if she has no home of her own, asks for a ticket to some point where she thinks she can get a job. Although she has no official jurisdiction over them, the superintendent makes an effort to keep in touch with discharged patients for the purpose of advising and encouraging them. Those who are trying to live decently are likely to send back an occasional line; some of them, indeed, write lengthy and interesting letters at regular intervals. Others who have resumed an irregular mode of living are silent. Such information concerning discharged patients as finds its way back to the Farm has been readily available for the investigator and has been of great value in locating cases.

2. In November and December, 1918, a number of internes were studied at close range (report elsewhere). Friendly relations established with patients during quarantine simplified follow-up work in their own cases; it also served as introduction of the investigator in many cases of women quarantined later who were acquaintances of the earlier group. At best, locating discharged patients has been a slow process. In an attempt to follow up thirty women reported to have gone to a certain city, interviews were secured with only nine. In the cases of ten no trace at all could be found at the time; a year later three of these were located in other towns. Three others were described as "in hiding"; they persistently avoided contact with strangers (later all three were returned to the Farm, one on the charge of bootlegging). Five of the thirty being sought were known definitely to have left town, two being paroled, vaguely, to Oklahoma; the other three had scattered to three different towns and were later located in their homes, while six who had moved away were located later, and three were never heard of again. In an oil town an attempt was made to locate six women known to have bought tickets for that place when released from quarantine. The authorities had some knowledge of the women, saying they

had "operated" in the community for a few weeks, but had finally been driven out of town, and had been heard of in an Oklahoma oil town not far distant, where they were following their trade. In one instance a woman of thirty-four, her daughter of sixteen—the latter with a six-weeks-old baby, born at the Farm—left Lansing for a city (not the place from which they had been committed), where they claimed to have friends. It is known that they arrived safely; they were seen to alight from a train at five o'clock in the morning. Nohting has been learned of them since, however.

3. These cases are fairly characteristic, showing the difficulty in the way of readily locating patients released from the Farm, and the roaming disposition of many of the women and girls studied. The majority of them were wanderers before they came to the Farm; they had no established homes. At one time (Miss Hill's report) less than half the girls in quarantine had usually lived with their parents; at the same time 68 per cent of all women who had been married were either separated or divorced from their husbands. In the case reports submitted below, attention is directed to the number of broken homes, both in the cases of girls where separation or death has removed a parent and the introduction of a step-parent has followed, and in the instances of adult women with histories of several marriages dissolved by law and children turned over to the care of outsiders. Abnormal home conditions are at least partly responsible for the tendency, so frequently observed on the part of the delinquent women studied, to move about. In collecting data at the Farm it was found at one time that of all the girls interviewed (over 100) only one-sixth had ever remained as long as one year in one place of employment. In questioning thirty girls who gave their occupation as waitress, only four were found who claimed to be able to cook. For such unskilled labor the demand is variable. It happens, therefore, that women following this occupation tend to wander from place to place in search of jobs. This unstable life is likely to lead to bad consequences.

4. Patients who give their occupation as waitress have always been numerous at the Farm, comprising at different times from one-third to two-thirds of the population. It is realized that the occupation of waitress has an attraction for cladestine prostitutes. It affords a market place where they may cunningly advertise their real business; it also serves as a cloak for their illicit living, often standing in the way of their conviction of vagrancy and kindred charges. Nevertheless, it is thought that many irresponsible, ignorant, untrained girls, not yet depraved, hit upon the occupation because it is the only thing they can do.

5. A girl (220) seventeen years old was arrested in a raid in a city adjacent to a military camp. She had worked in three different cafés in four months; had made the acquaintance of a number of soldiers; while at work had joined their parties, influenced by an older girl, and had soon become identified with a "rough crowd." As far as can be learned, this girl had not been immoral before coming to the city to work. She had lived in a near-by village, keeping house for her step-father, a miner, and caring for her young step-brothers. Her own father had died when she was four years old; her mother was confined in a

state hospital for the insane when the girl was fourteen and just finishing the seventh grade in school. She took up the cares of the household, and all seems to have gone smoothly until the girl began to suspect that the stepfather was becoming interested in a woman, and that he was attempting to have his marriage annulled. Incensed at the cruel injustice to her mother in the asylum, the girl left her stepfather and went to the city to make her own way. During nine weeks' quarantine at the Farm she adapted herself well to the routine. She was thought to be the type of girl who would have made satisfactory progress if she could have remained long enough to have had additional training to enable her to compete in an occupation where the moral hazard is not acute. After her discharge from the Farm she returned to her former girl companion, and in a few weeks both had disappeared from the community. Efforts to trace this girl have been unsuccessful.

6. A case fairly characteristic of the young wayward girl, probably subnormal, who is in need of supervision, is that of a girl (166) not seventeen years old, who is in quarantine at the Farm for the third time. She was born in Kansas; youngest of nine children. Her parents have lived in H—— for fifteen years. Her father is a lazy old soldier whose sole contribution to the family upkeep for years has been a small pension, which just pays the rent of the house they live in. The mother "goes out nursing." The girl suffered an attack of infantile paralysis when two years old and later had severe attacks of epilepsy. As she grew up the seizures became less frequent, and she was able to attend school fairly regularly, finishing the sixth grade at fourteen. When thirteen she was arrested one morning on the streets. She claimed to have been attacked by a strange man in the late afternoon as she was coming from work at a factory in an outlying district near her home. She said she remembered nothing after the attack until she was brought into police headquarters. Very little credence was given to her story. She was released to her mother. From this time on she was wayward. Before she was fifteen she married a soldier, and a few weeks later was arrested in a raid, examined, and sent to the Farm for treatment. She made her escape from the Farm, but five days later returned voluntarily, saying she was "broke" and hungry. When she was discharged from the Farm some weeks later she met her husband, whom she knew to be a deserting soldier. They spent several weeks in a town adjacent to the girl's home; but finally, being without funds, returned to the parental roof. Her father soon tired of his son-in-law, who seems to have been as loath to labor as the old man himself. In a family fight the neighbors lent a hand, and someone suggested that the War Department be notified of the deserter's address. The young man disappeared. When the mother, who had been nursing, came home she found a job for the girl in a laundry. The following week the girl went with an older woman to another city, where they spent several weeks. They were arrested once in a raid, but released. The girl was robbed of clothing she had just bought; it was found in the trunk of the older woman. A quarrel followed, and the girl came back to her home, where, according to her mother, she chose the worst associates. The

mother says it is a wonder she wasn't arrested, adding in the next breath, "but she's doing fine now." At the time of the investigator's visit in the home the girl had no plans for the future beyond the idea of securing a divorce from her soldier husband, now stationed in Brooklyn; she would like to be free so she could marry someone else if the "right man came along." She said she was not interested in any man at that time; also that she was thankful that she never had a child. (Her first Farm record shows that she gave birth to a baby four months after her marriage, in 1917, and that the child was adopted by a married sister in western Kansas.) Investigation outside the home reveals that the girl has been supported for more than a year by a married man, rich, dissipated and reckless; that this man's wife has repeatedly appealed to the authorities to interfere; that at the time of the girl's arrest, just prior to her second quarantine at the Farm, in 1919, she was taken up in a rooming-house raid, and this man escaped by a back window. In November, 1920, this girl was brought in by the police with twenty-two other women, was examined, and ordered by the health officer to Lansing for treatment. When she becomes noninfectious she will be released to go where she pleases. This is one of many cases where further custodial care is obviously necessary; also, where parental care at an early age was not sufficient to combat delinquent tendencies.

7. Another case where supervision in the home was probably faulty in childhood is that of a girl (case 120) of fourteen sent into quarantine from a Kansas town, where she was found in a disreputable rooming house by a welfare worker. She had run away from a "mean" stepmother in California to travel with a man and woman of low character. The girl's father, through correspondence with authorities along the way, had traced the party. When the girl was found, three months after leaving home, the father was notified, but was unable to send money for her return home. The girl was referred to juvenile-court officers for attention. It was decided that because of her diseased condition and because of her short residence in the state, she was not eligible for admission to the Girls' Industrial School. She was therefore sent to Lansing. After the girl's discharge from the Farm, welfare workers in the town from which she was interned got into touch with an aunt in Colorado, who sent money for the child's transportation back to California. The question arises whether the girl will ever adjust herself to the conditions of the home from which she fled.

8. A girl (case 121), whose father, a hard-working man, had married a dissolute woman with a daughter eighteen, ran away with her new stepsister and was found in a rooming house in a city sixty miles from her home. Both girls were interned at Lansing. After their discharge they returned her to the parental home, which by that time was in a sad turmoil. The father, who seems to have been ignorant of the woman's character when he married her, had become discouraged over home conditions; the house was slovenly, his earnings were being dissipated, and his daughter had fallen into disgrace. A local welfare worker was advising him to have his daughter committed to the Indus-

trial School, when the girl took matters into her own hands and got married. She had completed four grades at school.

9. A girl of sixteen (case 185) was taken by the school nurse to the health officer for examination in H——. She was found to be diseased, and quarantined. While her mother was on a visit to a camp meeting in a nearby town the girl came under the influence of a notorious woman in the neighborhood, and together they went on trips to the country with taxi drivers. On one of these occasions the girl claims she was assaulted. The girl is cross-eyed, and has always been regarded by her teachers as of low-grade mentality. She completed the fourth grade in her fifteenth year. Her younger sister, now fourteen, has given her teachers a good deal of difficulty on the playground by her familiarity with small boys. She has been reported to juvenile-court workers. The father is a laborer, making adequate wages for the support of the family at the present time. He is inclined to shift from job to job, however, and the family has spent much of the time roving about. The man is surly and very much disliked in the neighborhood. The mother is a religious fanatic, neglectful of her housekeeping, but very affectionate with her children. She has very little education, but seems eager for the five children to have schooling and good clothes. The father neither reads nor writes.

10. In the summer of 1918 there was a girl (case 41) in quarantine who because of her pretty face and sweet manner attracted the attention of many visitors. She was twenty-four years old and a drug addict, and had been brought in by the police in a rooming-house raid. Her father had been a locomotive engineer, very intemperate, who preferred to live near the "roundhouse," in a neighborhood much poorer than circumstances compelled. The mother was good but "easy-going." The girl finished the grades and two years of high school. She was considered a modest girl in school. She went to work as cigar girl in a hotel, where she was much admired by "traveling men." A salesman, married and living in a distant city, provided her with an apartment, where she spent a year before she was eighteen years old. He was with her every week-end, and she says they were "very happy." He grew tired of the arrangement, however, and she returned to the dirty home by the railroad tracks, went back to the hotel to work, and began a series of irregular relations with a number of men. She finally became involved in a bootlegging case, but was not convicted. When she was twenty she began to use morphine. The same year her father died, and she and her mother continued to live in the same dirty shack by the railroad. The house became a rendevous for bootleggers and drug peddlers. After the girl was released from the Farm, where she was cured of the drug habit, she returned home and expressed a desire to go straight. She asked welfare workers to help her. A position was secured for her as telephone operator, but she was irregular in the discharge of her duties and held the place only two weeks. She slipped back quickly to the old mode of living. When her mother was stricken with influenza the girl braced up and gave her whole attention day and night to caring for her mother, and cleared the house of the disreputable characters who were habitually hanging about. She was thought by welfare

workers, who rendered assistance during the illness, to have been thoroughly aroused in the crisis. However, with the death of her mother, she seems to have lost grip on herself. Three days after the funeral she herself was taken ill. She would see no one except two colored women, drug addicts, who took up their abode at the house. When the investigator called, admittance was refused until the name of the superintendent of the Farm was offered as guarantee of good faith. The house was filthy and cold. The girl shivered as she talked; she was emaciated from illness and dissipation. At intervals she was alert, but usually hazy-minded; evidence of drugs was apparent. She said the little house she had lived in for twenty years had at last been condemned and would be torn down. She asked advice, but paid no attention to answers to her questions. When her case was reported to welfare workers it was said that the police were already shadowing the place, which was being frequented by both men and women of the lowest type. Later it was raided. The girl was taken to jail. The second night she made her escape. Recently she has been located in a large city in an adjoining state, where she is running a house of prostitution.

11. A young married woman, twenty-two years old (case 176), was discharged after nine weeks' treatment, to return to her parents, with whom she had been living at the time she was arrested in a rooming-house raid. The home consisted of two very dirty rooms over the back of a grocery store. Her parents, their three children—a boy of thirteen, a girl of eleven and baby of nine months—together with the young woman, her two-year-old girl, and her infant son, born six weeks after her discharge from the Farm, comprised the family. The young woman said her husband was suing her for divorce, and that he was living in adultery with a girl who had just given birth to a baby whose paternity he acknowledged. (This story was later verified.) The young woman admitted the illegitimacy of her own two-year-old daughter, but claimed that she had been assaulted. It was later learned that the child is the daughter of a man with whom she lived for two years. During that time records show that complaint was filed in juvenile court charging that the child was neglected. Two years after the investigator's first visit the young woman was found in a neighboring city with a new husband and a new baby; her two older children were with their grandparents, who had moved their family to another state.

12. Two sisters (cases 227 and 228), who have each been quarantined twice at the Farm, are from a family of ten children. The father, a Spanish War veteran, has steady employment on the military reservation near by. He cannot clothe and feed his large family, however, so aid is required from the local charities. There are seven children constantly at home, including two sons, twenty-three and twenty-four years old, who were both drafted in the World War and are now "laid up," one with rheumatism and the other "gassed." The oldest girl at home is seventeen. Two years ago she gave birth to an illegitimate child, who died. She is exceedingly nervous, with the poor muscular coördination that suggests St. Vitus dance. She is unable to work. Twin girls, fourteen, stupid and listless, have a history of many illnesses, but have

improved since their tonsils were removed two years ago through the efforts of Red Cross nurses of the sanitary unit stationed in the town during the war. A girl of sixteen is in the seventh grade and seems fairly bright; she is very slovenly. Another girl ten and a boy six, together with a four-year-old grandson, complete the family. The girls under consideration are at home intermittently. Agnes, the older one, mother of the four-year-old boy just mentioned, spends most of her time in a near-by city, where she rooms in a questionable neighborhood. She does not work. Her husband is serving a sentence at the State Penitentiary. He comes from a respected family, who insisted upon his marrying Agnes when their intimacy was discovered. Four months after their marriage a baby was born, the couple living at the time at the home of the young man's parents. Frequently Agnes would take the baby and go for a few days to her parents, then return to her husband. Finally she pursuaded her husband to go with her to live at the home of her parents. At this point his friends say he began to "go to the dogs." Maude, the younger of the two girls, like her sister, married before she was sixteen. Both girls stopped school before reaching the sixth grade. Concerning Maude the mother says she reformed last February and left town with a top sergeant. Asked if Maude had married the sergeant, the mother said she had not; that she had never been able to secure a divorce from the first husband, whose whereabouts are unknown. But that "everybody thought it was all right, because she is a good girl now." On being pressed for details of the reformation, the woman said vaguely that Maude had "got religion." At no time does it appear that these girls ever made an honest effort to work, although both are quite sound physically and of sufficient intelligence to realize the extremity of the family fortunes.

13. Some interesting Kansas family history is revealed in the story of two widows, half sisters (cases 82 and 95), aged respectively thirty-six and thirty-four, who have been interned at Lansing. Sarah, the older, has a son seventeen, self-supporting, and three daughters, fourteen, eleven and seven years old. They are the offspring of three marriages, two of which resulted in divorce. Sarah's oldest girl seems below average mentality; she is in the ungraded room at school. The younger girls are fairly bright. The oldest was assaulted at the age of twelve by a man of fifty, who was on terms of intimacy with the mother. The eleven-year-old girl has had sexual relations with a boy in the neighborhood. The three girls have been repeatedly referred to juvenile-court workers as neglected children. They have been provided with necessary food and clothing, but they have been left much alone in the house at night. The mother has usually been employed in restaurants, working on night shift, and has been otherwise absent from the home at night, when she attended dances. She had a bad reputation in the town for many years. Helen, her younger sister, is the mother of seven children; she was married at sixteen, and lived happily, she says, with her husband for seventeen years. He was a farm laborer. He died suddenly of influenza, three months before the seventh baby was born. She moved her family to town and put the children in school.

Mother's aid was granted by the county, and local charities supplemented relief. The baby had died, and Helen preferred to go to work in the restaurant where her half sister was employed rather than devote her whole time to work at home. She had her laundry work done outside, and kept Mary, the oldest girl, aged fourteen, at home from school to care for the two youngest boys. At Christmas time a great deal of assistance was given the family, it being a case that appealed to the sympathy of the community. Nevertheless, Helen, while not complaining of her hardships, began to make preparations to place the children in an orphanage, saying she was not domestic and felt if she could make more money, relieved of the responsibility of the home, she should do it. About this time both Sarah and Helen were arrested in a raid, found to be diseased, and sent to Lansing. Sarah's minor children were sent to the State Orphan Asylum; Helen's older children were scattered among relatives and the two youngest boys put in a local orphans' home. Helen's daughter Mary was taken ill and died just after her mother's release from quarantine. The other children are still under the supervision of outsiders. Helen is back at the restaurant, and agrees with her friends that the children are probably "better off where they are." Twenty-two years ago Helen's parents separated, and four little children—two of them the offspring of her mother's first marriage—were sent to the county poor farm. Helen and a brother a year younger never saw their parents again. Sarah and her brother a year later were claimed by their father. Eventually all four children were adopted by strangers.

14. A young woman of twenty-three (case 91), upon being discharged from quarantine, returned to her home and reported voluntarily at regular intervals for seven months to the health officer for examination. She admitted to the social-service nurse at clinic that she was a prostitute, but seemed to feel that she had police protection. The health department consulted police authorities regarding court proceedings, but no charges were made. Finally, on the occasion of the eighth examination, the woman was found to be diseased and was committed to the Farm for quarantine. She became abusive and was locked in jail. Shortly a man appeared at the jail, offering to marry her. The police matron, touched by this devotion, requested the health department to release the patient so that she could marry and become "an honest woman." It was explained that while the health department, unfortunately, had no power to prevent the marriage of diseased persons, it would, regardless of whether the marriage took place or not, insist upon the quarantine of the woman being carried out as indicated on the commitment. The willing bridegroom, who had meanwhile purchased the marriage license, upon learning that the woman must go to the Farm as ordered, hastened back to the probate court to return the license and have his money refunded. It was learned that he had been living for months on the proceeds of the woman's earnings. The woman has a child four years old, whose paternity is not definitely known. She was married at the age of fifteen, but separated from her husband the next year. She has a sister who "runs a house" in another town. The aged

parents divide their time between the two daughters. The mother is a shrewish creature, with goitre. The father is lame and blind in one eye; he is given to profane and obscene language, much of it directed towards the two daughters whose bounty he lives upon while he reviles them for their evil ways.

15. In H—— a girl of fifteen (case 162) had been released from the Farm three months before and was being held in the county jail, committed to the Girls' Industrial School. She had been a ward of the juvenile court for two years. At the suggestion of the public-health nurse she was examined and found to be diseased. Her younger sister (167) of fourteen was brought by the school nurse for examination and was also found diseased. Both girls were ordered to Lansing for treatment, after which they were to be placed in the Girls' Industrial School. At Lansing they were both found to be pregnant. When discharged from the Farm they were returned to their home, and later cared for through confinement at the county poor farm. Their father is a laborer; the mother, who is deaf, works out by the day. The fourteen-year-old girl, when at home, cared for two little brothers, aged four and two. The house was wretched, and the family greatly disliked in the neighborhood because of their quarrelsomeness. They were usually assisted by the Associated Charities, and were known over town as the "no-account C. family." No information was obtainable in regard to the babies born at the poor farm. The two girls, however, are known to be at present in a Salvation Army home in a distant city.

16. Twin girls (cases 122 and 123) were reported to the city health department in T—— by the county superintendent, who complained of their immoral influence in school. Previously they had been reported to juvenile-court workers. The social-service nurse found the girls living with their father, brother and sister-in-law in a two-room house on the edge of a cornfield. Both girls were found to be diseased. An effort was made to secure an order for their transfer to Beloit to follow their treatment at Lansing. It was suggested by the court that the girls be given "another chance." When they returned from the Farm they went immediately to the old surroundings. In a short time one of the twins was reported to the authorities by the wife of a neighbor with whom she was intimate. It was thought wise at this point to send the girl to Beloit. Her twin sister married, before she was sixteen, a man more than twice her age.

17. In picturing the wretchedness of surroundings just described it is not intended to convey the impression that the homes of all delinquent women studied are unsuitable, nor that the home influence in all cases has been degrading.

A girl of seventeen (case 994) had fallen into bad company. Her first misstep resulted from her meeting with a young man—one of four soldiers invited to the home by the father to eat Thanksgiving dinner. The girl was fascinated and the young man unscrupulous. Through him she met other bad companions. She refused to heed the warnings of her parents, thinking that because she had gone to work she was able to look out for herself. When she was found to be diseased it was felt by the parents that quarantine at the Farm might be just the lesson she needed. At the institution she was amenable, conscientious in the discharge of her duties, and apparently in a happy frame of mind. The superintendent was hopeful of her future, and the girl left promising to "be good." However, when she returned home she renewed her former friendships and was soon in trouble again. She is now in a maternity home. After her baby is born it will be adopted and she will return home. The parents are intelligent. The father is a hard-working man; the mother, a school teacher before marriage, is a good housekeeper and tender of her children, of whom there are five. The income is small, but by wise management is stretched to meet the needs of the family. The house is neat and cozy; there are books and a piano. Best of all, there is a cheerful atmosphere—no complaining. There is not readily apparent any lack of discipline; only the evidence that this girl, whose worst trait is her too ready acquiescence, slipped from their influence so completely. She is so modest and refined in appearance as to be always conspicuous when in the company of the girls and men with whom she has associated for the past year. When confiding to the social-service nurse her condition she was asked if she had informed the man responsible for her pregnancy. She replied, "Oh dear no; I couldn't talk to a boy about such things." It is felt that hers is a case to be studied by a psychiatrist.

18. A girl of nineteen was arrested on a military reservation during the war. She wore boy's clothes and her pockets contained only nine cents, a package of cigarettes and a small leather-bound volume of Omar Khayyam. She was committed to the Farm on the charge of vagrancy, and upon examination was found to be diseased. She never admitted sexual relations with more than one man—a soldier whom she had followed from a camp near her home in a northern state. When they reached Kansas he told her he was married, and they separated. Whether he deserted her, or she him, is not known. She spent six months at the Farm. She was an excellent worker in the fields, a leader in outdoor sports, and very fond of books and music. She had had three years' high-school work. Before she was ready to leave the Farm she wrote a frank letter to her mother in the North and received by return mail an earnest appeal to return home; money was inclosed for transportation. The superintendent has received letters from both the girl and her mother, expressing the deepest gratitude for the care and help given the girl while at Lansing. There was no mistaking the awakening of this reckless girl during her quarantine. A letter just received—two years after the girl's release—states that the "little tramp is changed to a dutiful daughter."

19. SUMMARY. In the study of home conditions, cases are roughly designated and divided as follows: Bad, 69 per cent; fair, 25 per cent; good, 6 per cent.

Fifty per cent of all women and girls studied covered less than seven grades in school; nine per cent had some high-school work and one per cent had entered college.

Sixty-two per cent of those who married, married before they were sixteen years of age. Fifty-nine per cent of those who married have borne children.

Such difficulties were encountered, as might be expected, in accumulating data concerning illegitimate births and miscarriages out of wedlock, that hopes of obtaining anything like accurate figures were abandoned. Fifteen per cent of the women admit bearing illegitimate children; three per cent admit miscarriages out of wedlock.

20. Tracing 170 children of 75 mothers, it was found that only 14 of them are under the supervision of a parent—in all cases the father. The other 156 children are growing up under abnormal conditions in institutions or in adopted homes. Five are in poor farms, 18 in orphanages, 4 in the Winfield institution, 5 have been legally adopted, 5 are under the supervision of the probate courts and temporarily in private homes. There are 6 whose whereabouts are unknown to the mothers, and 113 described by their mothers as "scattered."

PART III.

1. It will be noted that in Part I considerable space was devoted to a discussion of the mental status of the delinquent women and girls studied. No apology is offered for invasion of this field. It is felt that supervision of the mentally defective is one of the first steps to be taken in Kansas to strike at the sources of moral sickness. The Kansas schoolroom offers ample opportunity for observation of mental subjects; the juvenile court is another social laboratory. School teachers and social workers, often more readily than parents, can detect the child's need for an expert's advice. Securing such advice and following it up with the prescribed special training necessary to combat antisocial tendencies is one of the first steps in the approved procedure of protective social measures.

2. Large numbers of subnormal adolescent girls and older feeble-minded prostitutes described above could have been recognized as potential delinquents if they had been studied nearer the starting point of their careers. Early diagnosis of their cases and proper provision for their care would have been economical procedure on the part of the community and of the state. The antisocial conduct of one feeble-minded prostitute will cost the community irreparable damage in diseased young manhood and in a future sickly citizenry. The woman's illegitimate children are likely to become an additional contribution to the criminal population of the state. Thus it will be seen that she is a menace to the future as well as to the present generation.

3. The names of many of the subnormal women now quarantined at Lansing are to be found in the court records of Kansas counties. Some of them have been at some time inmates of the State Orphanage or of the State Industrial School; others have been cared for by institutions receiving public funds. Record files of various associated charities in Kansas abound in family histories of women who are at present inmates at Lansing. They may have been known first to the associations as undernourished children, as wayward girls "referred to the juvenile officer for supervision," or as improvident or delinquent mothers. Again the responsibility of pseudo supervision rests partly on the community which dips in without going far enough to reach bottom. It is believed by those who have been studying the problem of delinquency that the niggardly provision of some states for their defectives, slipshod methods

in court procedure, involving disposition of dependents and delinquents, and serious mistakes of judgment on the part of ill-trained welfare workers, have conspired to send around in a vicious circle those persons whose helplessness entitles them to the most careful supervision.

4. In cases 120 and 162 reference is made to inadequate handling of delinquent girls in juvenile courts. In cases 122 and 123 a probate judge refused coöperation in planning the future of diseased girls of juvenile age. In case 197 attention is called to the efforts of a welfare worker to secure custodial care for the patient, a feeble-minded prostitute of the most vicious practices, but at the time noninfectious and therefore ineligible for quarantine commitment. The county attorney consulted "did not like to tackle it." After roaming some weeks this woman was committed to Lansing on adultery from another county. She was found by the superintendent at the Farm to be of suicidal tendency. Through the probate court of Leavenworth county she was committed to the hospital for the insane. Recently two other women (case 246), whose delinquencies are of long standing, were transferred from the Farm to a state hospital for insane. Credit is due the superintendent of the institution, whose humane and scientific planning looks toward providing necessary custodial care for the criminally insane who come under her observation. Perhaps it is not presumptuous to commend the probate judge of Leavenworth county for his enlightened policy in disposing wisely of these cases.

5. It is the opinion of the investigator that practically every diseased girl of juvenile age should, by reason of her sex delinquency, be committed to an Industrial School for Girls. It is realized that state authority has ruled that the superintendent at the State Industrial School at Beloit may refuse to receive diseased girls at the institution. Such a policy has been called "short-sighted." While protecting girls already in the institution, it fails to make provision for a group of girls who are especially in need of training and care, and who if left at large are a constant source of danger to public health and morals. It has been shown that many girls who have long been delinquent are apprehended for the first time when they are found to be diseased. If the state fails to provide correctional training as well as treatment for disease for these girls, it loses an opportunity to reclaim them for normal society. The present arrangement of sending diseased girls and women of all ages to the Farm is at best a makeshift. The superintendent, rising to the emergency, has instituted methods of handling the patients in small groups, for the better protection of the younger. But the failure of the state to assume its responsibility in caring for diseased girls at an institution where the regular scholastic and vocational training is provided leaves a wide gap in the whole program of combating moral delinquency in Kansas. The folly of sending girls into quarantine for brief periods and then releasing them is apparent. Several social workers, realizing this, have evolved the plan of taking girls of juvenile-court age, who are found to be diseased, before the judge and asking that they be committed to Beloit, their sentence to begin immediately upon their discharge from quarantine. A number of cases have been handled in

this way. Some transfers have been made successfully; others have failed to go according to schedule. Such procedure is clumsy and expensive and a poor substitute for the careful method that should characterize the handling of difficult social problems.

6. It has been suggested that diseased girls be committed to Beloit, and prior to mingling with girls already in the school, be given treatment until noninfectious in a quarantine cottage attached to the Beloit institution. (Doctor Treadway, p. 100.) If such a plan is not feasible and if the state persists in closing the doors of its only industrial school to young girls who are diseased, it is recommended that the state equip the Industrial Farm for Women with complete apparatus, including a corps of expert teachers for delinquent girls. This will make of the institution an industrial school farm, where the needs of both the adult and youthful inmates may be scientifically studied and met.

7. Through the persistent efforts of all welfare workers in the state, it is hoped that the majority of diseased women and girls whose delinquency demands it will come to the Farm with court sentences of such duration that constructive measures may be attempted towards accomplishing their rehabilitation.

Food Analysis LXXI.

OCTOBER 1, 1920, TO JANUARY 1, 1921.

E. H. S. BAILEY, *Director*. W. S. LONG, Chemist in Charge.

BEVERAGES.

278, Home Brew. From Elisha Scott, attorney, Topeka. Alcohol, 2.6 per cent.
279. Home Brew. From Elisha Scott, attorney, Topeka. Alcohol, 1.6 per cent.
1336. Beverage. C. A. McQueen, Lawrence. For police case. Alcohol, 19 per cent.
93499. Ginger Ale Flavor. Allen Bottling Co., Wichita. Passed.
93500. Ginger Ale. Allen Bottling Co., Wichita. Passed.
93505. Ginger Ale. Coco-Cola Bottling Co., Wichita. Passed.
93506. Ginger Ale Syrup. Coco-Cola Bottling Co., Wichita. Passed.
93507. Ginger Ale. Wichita Vinegar and Bottling Co., Wichita. Passed.
93508. Ginger Ale Extract. Foote & Jenks, Jackson, Mich. The Wichita Vinegar & Bottling Co., Wichita. Capsicum not found.
93509. Ginger Ale Extract. The Liquid Carbonic Co., Kansas City, Mo. The Wichita Vinegar and Bottling Co., Wichita. Capsicum present. Illegal.
93510. Ginger Ale. The Wichita Vinegar and Bottling Co., Wichita. Passed.

GRAPE FRUIT.

22871. Grape Fruit. Garden of Eden brand. Lux Mercantile Co., Topeka. Immature. Illegal.
22872. Grape Fruit. Standard Growers Exchange, Orlando, Fla. Whitaker Bros., Topeka. Immature. Illegal.
22873. Grape Fruit. Garden of Eden brand. L. D. Roose, Topeka. Immature. Illegal.

HONEY.

22886. Honey. Collected by inspector at Iola upon request of dealer. Passed.
22887. Honey. From Mr. Whitney of the Department of Horticulture. Passed.

ICE CREAM.

1332. Ice Cream. The Wiedemann Confectionery, Lawrence. Passed.
1334. Ice Cream. The Wiedemann Confectionery, Lawrence. Passed.
1339. Ice Cream. Investigational. Fat, 11.7 per cent. Illegal.
1340. Ice Cream. Investigational. Fat, 11.07 per cent. Illegal.
1341. Ice Cream. Investigational. Fat, 10.3 per cent. Illegal.
1342. Ice Cream. Investigational. Fat, 11.78 per cent. Illegal.
22877. Ice Cream. Chocolate. Investigational. Passed.
22878. Ice Cream. Vanilla. Investigational. Fat, 12.14 per cent. Illegal.
22879. Ice Cream. Chocolate. Investigational. Fat, 11.02 per cent. Illegal.
22880. Ice Cream. Chocolate. Investigational. Passed.
22881. Ice Cream. Vanilla. Investigational. Fat, 11.96 per cent. Illegal.

22882. Ice Cream. Vanilla. Investigational. Fat, 11.62 per cent. Illegal.
22883. Ice Cream. Chocolate. Investigational. Fat, 11.71 per cent. Illegal.
22884. Ice Cream. Chocolate. Investigational. Passed.
22885. Ice Cream. Vanilla. Investigational. Fat, 13.1 per cent. Illegal.
93493. Ice Cream. Chocolate. The Steffens-Bretch Ice and Ice Cream Co., Wichita. Fat, 11 per cent. Illegal.
93494. Ice Cream. Maple. The Steffens-Bretch Ice and Ice Cream Co., Wichita. Passed.
93495. Ice Cream. Strawberry. The Steffens-Bretch Ice & Ice Cream Co., Wichita. Fat, 11.20 per cent. Illegal.
93496. Ice Cream. Vanilla. The Steffens-Bretch Ice and Ice Cream Co., Wichita. Fat, 12.20 per cent. Illegal.
93497. Ice Cream. The Steffens-Bretch Ice and Ice Cream Co., Wichita. Fat, 10.40 per cent. Illegal.
93498. Ice Cream. Chocolate. The Steffens-Bretch Ice and Ice Cream Co., Wichita. Fat, 11.28 per cent. Illegal.
93501. Ice Cream. The Snyder Ice Cream Co., Wichita. Fat, 11.06 per cent. Illegal.
93502. Ice Cream. Chocolate. The Snyder Ice Cream Co., Wichita. Fat, 11 per cent. Illegal.
93503. Ice Cream. Strawberry. The Snyder Ice Cream Co., Wichita. Fat, 10.50 per cent. Illegal.
93504. Ice Cream. Strawberry. The Snyder Ice Cream Co., Wichita. Fat, 10.47 per cent. Illegal.
93511. Ice Cream. Vanilla. Zipp Butter and Ice Cream Co., Wichita. Fat, 13.13 per cent. Illegal.
93512. Ice Cream. Strawberry. Zipp Butter and Ice Cream Co., Wichita. Passed.
93513. Ice Cream. Fruit. Zipp Butter and Ice Cream Co., Wichita. Passed.
93514. Ice Cream. Zipp Butter and Ice Cream Co., Wichita. Fat, 13.3 per cent. Illegal.
93515. Ice Cream. Maple Nut. Zipp Butter and Ice Cream Co., Wichita. Passed.
93518. Ice Cream. Strawberry. Zipp Butter and Ice Cream Co., Wichita. Passed.

EXTRACTS.

1347. Vanilla Extract. From the State School for the Blind. Passed.
81392. Vanilla Extract. Joseph Burnett Co., Boston. Passed.
81393. Vanilla Extract. Hewson brand. C. A. Murdock Mfg. Co., Kansas City. Passed.
81394. Vanilla Extract. Harvest Home brand. The Jett & Wood Merc. Co., Wichita. Passed.
60784. Vanilla Extract. Seelye's. The A. B. Seelye Mfg. Co., Abilene. Abnormal.
60785. Vanilla Extract. Dr. Price Flavoring Co., Chicago. Farmers' Union, Abilene. Passed.
60786. Vanilla Extract. Golden Gate brand. J. A. Folger & Co., San Francisco and Kansas City. Passed.
60787. Vanilla Extract. The Ennis-Hanley-Blackburn Coffee Co., Kansas City, Mo. Farmers' Union, Abilene. Passed.
60788. Vanilla Extract. Summer Girl brand. H. D. Lee Merc. Co., Salina. Passed.
60789. Vanilla Extract. The Johnson-Layne Coffee Co., St. Louis. F. Braun, Kansas City. Passed.
60790. Vanilla Extract. C. F. Sauer, Richmond, Va. F. Braun, Kansas City. Passed.
60791. Vanilla Extract. C. A. Murdock, Kansas City, Mo. H. Kulka, Kansas City. Passed.
60792. Vanilla Extract. Paddock Coffee Co., Kansas City, Mo. H. H. Harris, Kansas City. Passed.
60793. Vanilla Extract. Southwest Groc. Co., Kansas City, Mo. C. E. Cannon, Kansas City. Passed.

MISCELLANEOUS.

1330. Meat. From Neosho Falls. No poison detected. Passed.
1330*a*. Water. From Neosho Falls. No poison detected. Passed.
1331. Vinegar. From W. A. Schmidt, food inspector. Butler county, Kansas. Passed.
1332. Milk. Simon R. White, Lawrence. Passed.
1333. Milk. City Health Department, Kansas City. Passed.
1335. Tablets. Dr. B. F. Eye, Rantoul. "Found in coffee pot." Found to contain corrosive sublimate.
1337. Catsup. Dolon Merc. Co., Atchison. G. Daugherty, Topeka. Passed.
1337*a*. Sugar. Ottawa Condensing Co., Ottawa. Passed.
1338. Cider Vinegar. Examined on request of Twenhofel Merc. Co., Kansas City. Found to contain dilute acetic acid.
1339. Meat. Sent from Council Grove. No mineral poison or alkaloid found. Meat was tainted.
1344. Flour. Examined on request of the J. C. Lysle Milling Co., Leavenworth. No rice or cornstarch found.
1345. Coffee. Examined on request of Dr. H. M. Butler, health officer, Winona. Said to have foreign odor. Infusion which was sent for examination had odor resembling turpentine. Infusion made in laboratory was normal.
1350. Salt. Examined on request of Forrest A. Kelley, M. D., secretary Board of Health, Winfield. Said to have caused the death of fourteen hogs and two cows. Found to contain a compound of arsenic.
1351. Canned Beans with Pork. The Glick Merc. Co., Pittsburg. Passed.
1352. Canned Tomatoes. Kruner's. Shirley Bros. & Co., Chanute. Passed.
50360. Canned Peas. Royal brand. Watson, Durand, Kasper Groc. Co., Salina. Passed.
93446. Cream. Ed. Cero, Wichita. Passed.

Dangers in Childbearing.

Even at this late date, more women between the ages of fifteen and forty-five years die from causes incidental to childbearing than from any other cause except tuberculosis. This condition has begun to interest seriously those concerned with the conservation of human life, and as a result a hitherto undeveloped field of public-health work has been opened up.

An inquiry sent out recently by this company to health officers of all the states and larger cities having good birth registration has resulted in the following information for the year 1919:

1. More than five women die from disorders of pregnancy or childbirth out of each 1,000 births registered. This is equivalent to one maternal death out of every 185 confinements.
2. Forty-five babies out of every 1,000 total births, or one out of every twenty-two, are born dead.
3. Forty babies out of every 1,000 born alive die before they are one month old.

Such are the dangers to mother and infant at the present time.

As against the above figures are the following which prevail among women who receive prenatal and maternity care under skilled direction:

1. Only *two* women instead of *five* die out of every 1,000 confinements.
2. Only *twelve* babies instead of *forty-five* are stillborn in every 1,000 births.
3. Only *ten* babies instead of *forty* per 1,000 born alive die under one month of age.

Results such as these have been achieved in Boston, in New York City and elsewhere. They can be obtained anywhere if adequate nursing and medical care are available to women during pregnancy, at confinement and during the first month of the infant's life. Such is the great promise in life conservation held out by prenatal and maternity care for women. —*Metropolitan Life Insurance Company.*

Report of Laboratory for January, 1921.

TOPEKA, KAN., February 2, 1921.

MEMORANDUM
To: Secretary State Board of Health.
From: Public Health Laboratory.
Subject: Report of work done by Laboratory for the month of January, 1921.

1. Complement fixation test for syphilis:	*January.*	*December.*
Blood specimens (from physicians):		
Positive	71	86
Negative	330	303
Doubtful	31	19
Unsatisfactory	22	37
Totals	454	445
Blood speciments (from Dr. Axford at Lansing):		
Positive	31	9
Negative	88	36
Doubtful	18	3
Unsatisfactory	1	9
Totals	138	57

	January.	*December.*
Spinal fluid:		
Positive	3	..
Negative	14	5
Doubtful	1	2
Totals	17	7
2. Examination of sputum for tuberculosis:		
Positive	25	28
Negative	119	89
Unsatisfactory	9	5
Totals	153	122
3. Examination of cultures for diphtheria:		
Positive	23	114
Negative	498	1,244
No growth	111	224
Unsatisfactory	4	5
Totals	636	1,587
4. Examination of smears for gonococcus (physicians):		
Positive	7	5
Negative	19	22
Unsatisfactory	2	3
Totals	28	30
From Detention Camp at Lansing:		
Positive	4	7
Negative	102	102
Unsatisfactory	1	8
Totals	107	117
5. Examination of widals for typhoid fever:		
Positive	7	10
Negative	4	4
Unsatisfactory	1	6
Totals	12	20
6. Examination of Stool Cultures for typhoid fever:		
Positive	2	..
Negative	4	12
Unsatisfactory	..	1
Totals	6	13
7. Miscellaneous examinations:		
Dog's head	1	..
Throat culture	1	..
Cell Count for spinal fluid	1	..
Totals	3	15
Totals	1,554 (Jan.)	2,413 (Dec.)

Report of Division of Water and Sewage.

JANUARY, 1921.

ALBERT H. JEWELL, Chief.

I.

Permits Issued or Refused for Waterworks and Sewerage.

Date.	*Place.*	*Nature of improvement.*
Jan. 19	Caney	Revision of plans No. 960.
Jan. 19	Courtland	Revision of plans No. 911.
Jan. 13	Wellington	Mausoleum.
Jan. 18	Wichita	Sewer extensions.

Final Inspections on Completed Work.

Jan. 12	Baxter Springs	New sewers.
Jan. 11	Newton	Sewage disposal.

Plans or preliminary reports have been received or conferences have been held with municipal authorities for new work at the following places:

Anthony	Additional water supply.
Augusta	Mausoleum.
Burrton	Additional water supply.
Emporia	Water improvements.
McPherson	Sewer extensions.
Manhattan	Water-softening plant.
Medicine Lodge	Conference on water supply and investigation of schoolhouse sewage.
Osawatomie	Extensions to sewer system.
Oswego	Sewage.
Ottawa	Water-purification plant.
Topeka	Water-filtration plant.
Topeka	January 7 and 10, conferences.
White Water	New water supply.
Wichita	Mausoleum.
La Crosse	Additional water supply.

Inspections Made.

Date	*Place.*	*Nature of inspection.*
Jan. 18	Clay Center	City water supply.
Jan. 19	Wakefield	City water supply.
Jan. 20	Miltonvale	City water supply.
Jan. 20	Miltonvale	U. P. private supply.
Jan. 20	Garrison	Water supply.
Jan. 20	Garrison	U. P. private supply.
Jan. 22	Beloit	City water supply.
Jan. 24	Glen Elder	City water supply.
Jan. 24	Waconda Springs	Bottled water supply.
Jan. 24	Cawker City	City water supply.
Jan. 25	Bennington	City water supply.
Jan. 25	Minneapolis	Water supply.
Jan. 25	Simpson	Waterworks.
Jan. 26	Delphos	City water supply.
Jan. 26	Glasco	Waterworks.
Jan. 27	Lucas	City water supply.
Jan. 27	Lincoln Center	Water supply.
Jan. 27	Sylvan Grove	City water supply.
Jan. 28	Luray	Water supply.
Jan. 28	Waldo	City water supply.
Jan. 28	Natoma	City water supply.
Jan. 29	Plainville	City water supply.
Jan. 29	Hill City	City water plant.
Jan. 31	Oakley	Water supply.
Jan. 31	Sharon Springs	Water supply.

Record of analyses made in water and sewage laboratory at Lawrence during January, 1921:

Source of supply.	*Bact.*	*Chem.*	*Miscel.*
City supply	430	27	..
Bottled waters	4	..	..
Private supplies	16	..	..
Railroad supplies	15	..	..
Ice	6	..	..
Miscellaneous	8	..	..
Chlorides	..	..	6
Oil	..	..	1
Totals	479	27	7—513

Licenses Issued.

Date.	*Place.*	*Person or firm and purpose.*
Jan. 15	Greenleaf	Missouri Pacific. City supply.
Jan. 15	Havensville	Union Pacific. Private supply.
Jan. 31	Independence	Santa Fe. City supply.
Jan. 15	Lawrence	Union Pacific. Private supply. Refused.
Jan. 18	Marquette	Missouri Pacific. Private supply.
Jan. 15	Onaga	Union Pacific. Private supply. Refused.
Jan. 14	Ottawa	E. E. Heth & Co. Bottled water.
Jan. 14	Argentine	Tucker Mineral Springs. Bottled water.

Errata.

The word "passed" after items 93473, 93434, 93435, 93436, 93437, 93438, ice cream, on page 13 of the January, 1921, State Board of Health Bulletin should be "illegal."

Mates.

A boy and girl to whom the gods had been kind experienced the miracle of love. Each knew that life could offer nothing of greater worth than the other. They stood at a gate and exchanged vows.

"I am going away to become famous," said the boy, "and when I have earned my laurels I shall return and kneel at your feet."

"You are very wonderful," replied the girl. "I shall remain here and wait, and always I shall try to be worthy of you."

The boy went away to a great city and labored. When he had finished a day's labor he found means to while away the long hours of the evening. He did many things boys should not do and each of them left a scar on his soul—a scar unseen by his fellows and little considered by himself. In spite of scars he climbed fast and high, and after a few years became a great man. Strangers called him a genius, and even his friends admitted that he had unusual ability.

When he had acquired wealth and fame he built a great house and prepared it for his bride. Then he left his affairs to subordinates and set out for the home of his boyhood. She who had exchanged vows with him at the gate met him there again.

She was broken in body and spirit. Rouge and powder could not hide the unhealthy pallor of her skin, nor could the brazen stare of her eyes wholly conceal the shame that lay behind them. Her cheap finery cried aloud of the price exacted in the depths to which she had descended and her voice held the whine of the outcast.

"Ah," he cried, "you promised to wait and be worthy of me!"

"Have I not waited?" she asked. "Am I not here? And surely I am worthy. Detectives have kept me informed concerning you. Each day I have followed your example in an effort to be like you. What you have done I have done. Your creed has been my creed, your code my code. We are two creatures molded to a like pattern. We are affinities. As I am worthy of you, so you are worthy of me. Let us wed."—*Saturday Evening Post.*

Plumbopathy.

A SATIRE ON CULTS IN MEDICINE.

The editor of the Fresno (Cal.) *Republican,* some six months ago, evidently feeling in a pleasantly bitter mood, took his pen in hand and turned out the following comment on the new school of plumbopathy.

"PLUMBOPATHY."

"We rise again to protest! Examinations were held in Fresno last night for plumbers' licenses. No one is permitted to practice plumbing in California without such a license. And all the examinations are in the complete control of the regular or plumbopathic school. This is a rank discrimination against the disciples of other plumbing faiths.

"The plumbopathic school, for instance, holds to the doctrine that air has pressure, and that an air outlet, properly connected, is therefore necessary behind every water seal, to keep the pressure on the two sides equal. Shall persons who do not believe in air pressure be deprived of their constitutional liberty to choose a plumber of their own suckopathic school, who will make the connections all the way to the sewer unvented, to increase the suction? The plumbopaths also believe that when the water stops running from a faucet, there is some obstruction in the pipe leading to that faucet. Shall we give them the legal right to exclude from practice the aëroplumbs, who teach that it is due to the wind blowing in the wrong direction? When the pipe joints leak, also, it is plumbopathic therapy to repack the screw threads with red lead. Shall this procedure be imposed on a householder who believes that they ought, instead, to be packed in ice, to contract the metal, and shall he be denied his liberty to call in a practitioner of the gelopathic school?

"Moreover, why should plumbers be examined on their practical knowledge of pipes and metals and joints, and of the legal requirements for installing them? These pipes and joints are not the ultimate Truth of plumbing. They are merely its proximate manifestations. On the plane of the Absolute, all Plumbing is Water. The ingress and egress of Water is the Supreme Significance of Plumbing. But water is no mere immediate Fact. It is derived from the melting snows of the Providential Mountains, or from the raindrops of the Heavenly Clouds. And these are but manifestations of the Force of the Sun. Therefore, considered absolutely, and not relatively, water is Sun, Helios. Shall the practitioners of Heliodic Science be required to divert their attention from these high contemplations to mere material pipes and wrenches, as a condition of treating errors of plumbing by a Heliogenic absent treatment?

"We suggest that the dissenting plumbers and their potential customers form a League for Plumbing Freedom, to demand of the legislature equal recognition for all schools of plumbing, and especially to exempt from examination on the theory and practice of plumbing all persons who have conscientious scruples against such knowledge, and who believe that plumbing can be done better without it."

Presumably the powers that be could not see the matters in the same way that our editorial colleague sees it. So recently he has again dipped his pen in a well of gall and wormwood:

UNJUST DISCRIMINATION.

"We are moved once more to register our annual protest against the pending examination for plumbers' licenses. It is seriously proposed that no one shall practice plumbing in Fresno unless he knows plumbing, and that his competency shall be established by examination before a sectarian board, all of whose members but one are orthodox plumbers, and that one is an educated physician.

"What chance has a graduate of the aëropractic correspondence school of plumbing before such a board? There should be a referendum to the people, on a law authorizing the aëropractors to license themselves, on such educational qualifications as they are able to come up to. What right have these orthodox plumbers to examine candidates on hydrostatics and sanitation, or to test their knowledge of pipes and fixtures, or their skill in installing and repairing them? The aëropractors have testimonials showing a lot of people who never had any orthodox plumbing in their houses, and are still alive. Is it not an interference with religious liberty to confine the practice, in Fresno, to the one sect which knows pipes, fixtures and sanitation, and does its work with trained skill and in accordance with the ordinances?

"It is not the rights of the aëropractors alone that are involved. Even they are relatively materialists. Since the purpose of plumbing is to remove stench, their technic is to let the wind blow it away, or to install electric fans to help out the wind, in closed places. But there are more spiritual practitioners of the plumbing art who demonstrate that there is no such thing as stench. Stench is a sensation; not a fact. Sensation is a function of the mind. And since stench is a disagreeable sensation, it may exist in the mind but not in Mind. The remedy, therefore, is to raise mind to Mind, by the perusal of the textbook on Spiritualized Sanitation. This proposed plumbing examination is an intrusion on the liberty of conscience of all disciples of the Spiritual Sanitarians.

"If there is to be any such arbitrary requirement, we submit that there should be provision for certificates of conscientious objection for those who do not wish to comply with it. Otherwise we shall be discriminating unjustly in favor of educated plumbers, by requiring education of their competitors. An educational qualification is undemocratic, in a community in which there are more people who do not know plumbing than there are who do know it. Let the majority rule."—*Montana Bulletin.*

Public Health and the Submerged Classes.

That more than 75,000 men, women and children out of a total population of 783,000 are dependents, delinquents or feeble-minded and are unable either to work or fight, and are a constant drain on the finances, health and morality of the state, is the startling result brought out by a survey conducted in Oregon. Moreover, more than 500 school children out of a total school enrolled population of 32,500 were found to be more or less mentally deficient—a fact which is of much significance when it is remembered that the condition of the children of to-day is the best possible index to the condition of the community of to-morrow, and, indeed, to the future of the race.

The figures yielded by the Oregon survey are considerably lower than the average shown by the draft examination—a fact that indicates, in the opinion of the United States Public Health Service officers, that they are certainly not higher than those that would be obtained by similar surveys in other states. It is considered greatly to Oregon's credit that it has been one of the first states to realize the importance of the problem and to take effective steps toward ascertaining the exact facts concerning it.

The survey was authorized by the Oregon legislature and was carried out by the University of Oregon in collaboration with Dr. C. L. Carlisle, of United States Public Health Service.

"The making of the survey," said Surgeon General H. S. Cumming, "was not an easy task, for in Oregon, as in many other states, comparatively few of the types involved are being cared for in institutions. The rest are widely scattered and were practically unknown, for most of them are quiet and do not attract attention as do the insane and criminal. It was therefore necessary to build an organization to find them and report on them.

"As there was little money to pay trained workers, Doctor Carlisle enlisted volunteers, largely among the professional classes, in every part of the state, and, through these, found the people sought and collected data concerning their behavior, present history, school history, social relations (whether dependent, delinquent, or feeble-minded), the cause of their condition, and so on.

"The prevention and correction of mental defectiveness," continued the Surgeon General, "is one of the great public-health problems of today. It enters into many phases of our work, and its influence continually crops out unexpectedly. For instance, recent studies made in connection with the spread of venereal diseases have shown that feeblemindedness is an important factor in prostitution. Again, work of the United States Public Health Service in connection with juvenile courts shows that a marked proportion of juvenile delinquency is traceable to some degree of mental deficiency in the offender.

"For years public-health officials have concerned themselves only with the disorders of physical health, but now they are realizing the significance of mental health also. The work in Oregon constituted that first state-wide survey which even begins to disclose the enormous drain on a state caused by mental defects."

One of the objects of the work was to obtain for the people of Oregon an idea of the problem that confronted them and of the heavy annual loss, both economic and industrial, that it entailed. Another was to enable the legislature to devise a program that would stop much of the loss, restore health, and bring to lives of industrial usefulness many of those now down and out, and, above all, to save hundreds of children from growing up to lives of misery.

Clerk: Now that you've seen all the blankets in the store, which one do you wish?

Lady: Well, I was only looking for a friend and didn't expect to buy.

Clerk: Well, ma'am, if you think she's in that remaining blanket up there, I'll take it down for you.

Prophylaxis and the "Ignorant Foreigner."

We frequently hear the expression, "The foreign population in our district supplies the source of infection for communicable diseases." That such statement is not always well founded, and that the "ignorant foreigner" is sometimes very prompt to take advantage of prophylactic measures offered by health departments, is illustrated by the following from the *Weekly Review* of the Detroit Health Department:

> "In Detroit this fall we have begun a wide application of the Schick test to discover school children susceptible to diphtheria. To these susceptibles will be given toxin-antitoxin to stimulate the natural production of antitoxin, which in turn will render the person immune to diphtheria—in all probability immune for life.
>
> "This work is carried out only after obtaining the consent of the parents. It is interesting to note that a number of people, some of them unable to speak English, having heard of this work in some schools, have brought their children to the department of health asking that they too be given the opportunity of being freed forever from the likelihood of contracting diphtheria."

Standing Pat.

The city physician in making his rounds examining the children in the various schools discovered a young girl who had badly affected tonsils, and when he reported the matter to the teacher in charge she sent a note to the child's mother explaining the situation and suggesting that the pupil be sent to the clinic, where the trouble would be rectified without any charge.

Promptly the next morning the teacher received a note from the mother reading as follows:

"We hain't makin' an' raisin' chilern fer the doctors to larn on. She has lived eleven years and hain't ben cut and she will die hold."

The Journey.

Did you choose the journey, friend?
No, nor I;
But to make it cheerfully
Let us try.
When the day is dark, I pray,
Sing a song to cheer the way,
For to-morrow we will be
One day nearer to the sea.

Did you choose the journey, friend?
No, nor I;
But we know the end will come
By and by.
All to-day we bear the load
Up the weary winding road,
But to-morrow we may be
At the inn in company.

—*Ruth Sterry.*

The Most Dangerous Animal in the United States.

The most dangerous animal on earth is the fly! That is the conclusion, not of sensation mongers, but of cool-headed and cautious scientists. That little, insignificant, pesky house fly is a thousand times more dangerous to you and your babies than all the man-eating animals of the world could be.

Roosevelt in his hunting trip through the darkest jungles of Africa never faced the danger that is now besetting the men and women and children of America. The blood-thirsty denizens of that dark continent do not harm the human family as much in a century as does the fly in one single summer. The poisonous reptiles of India are harmless playthings in comparison. Railroad accidents kill and maim many, but the fly is ten-fold more destructive.

Hitherto the fly has been regarded as a harmless nuisance and considered to be an annoying creature with its persistence and excessive familiarity. That was the way the last generation looked upon the household pest.

Now, however, the fly has been publicly indicted as a murderer of the human race, and the efforts to rid the world of him are not because he is a common nuisance—which should be enough—but because the fly is the greatest disease breeder and the carrier of more disease germs than all other animal life put together.

The health authorities of New York estimate that about one-half of the deaths from typhoid in that city are attributable to the distribution of the germs by the flies. They also declare that about three-fourths of the young children who die from the bowel complaints which flies are chiefly instrumental in spreading would never have been sick had proper precautions been taken against flies.

The numbers of bacteria upon one fly have been proved to range all the way from 550 to 6,600,000. The average is about 1,250,000 per fly. This represents the number of bacteria that enter the human system when one swallows a glass of liquid into which a fly has fallen.

Flies caught in the rooms of patients suffering from typhoid fever, smallpox, scarlet fever, tuberculosis and other diseases have been examined under the microscope, and in nearly every instance it has been found that they were not only covered but filled with the specific bacteria of these diseases.

From the sick room, from the rotten filth of the garbage pail, from the heaps of refuse, manure, and offal of all kinds, the death-bringing fly walks on the butter, the bread, the meat, the fruit upon the table, leaving everywhere the disease germs its furry feet have gathered up.

From the outhouses it goes to the baby's bottle; from the scum-covered pools it hurries to the family dinner table. And the victims are victims needlessly, for it takes but little precaution and little expense to rid the house of flies, and but the same effort upon the part of everybody to rid the country of the fly.

If you had rather live than die,
Roll up your sleeves and swat the fly.

Soaps in Relation to Hand Washing.

Sterile hands are not obtained in the ordinary process of hand washing. More bacteria were found to be removed by ordinary toilet soaps than by the special soaps. In other words, the cleansing properties of a soap are more important than its "germicidal" or "antiseptic" constituents. The soap solutions obtained in hand washing are of no practical germicidal or antiseptic value. In the whole process of hand washing done in the usual manner, the special so-called "germicidal" or "antiseptic" soaps exhibit none of these properties. Therefore these terms are not proper to use in connection with soaps. Finally, since the hands may serve as a medium for the conveyance of bacteria in infectious diseases, it is important to remove these bacteria, and this may be done by the ordinary toilet soaps as effectively, if not more so, as by the special brands of so called "germicidal" and "antiseptic" soaps.—*J. F. Norton, Journal A. M. A., July 31, 1920.*

Virulence of Diphtheria from Patients and Carriers.

Tests were made during a period of two years with 250 strains of the diphtheria bacillus. Ninety per cent of the strains that were isolated from cases of clinical diphtheria from the day of onset to and including one year after onset were virulent for guinea pigs. Eighty per cent of the strains isolated from a smaller series of healthy contact carriers who acquired the bacilli during epidemics were virulent, while only ten per cent of the strains isolated from non-contact carriers were virulent. The non-contact carriers of their series were persons in state institutions or schools where there were no cases of diphtheria, who, nevertheless, carried diphtheria bacilli in their secretions. Ninety per cent of the cultures that were obtained from convalescent patients during the first three months after the onset of the disease and from contact carriers were virulent. When the results obtained with cultures from convalescent carriers in whom the duration of infection is less than three months are examined, it is found that of 147 strains of B. diphtheriae, 136 or 92.5 per cent are virulent.—*A. B. Wadsworth, Jour. Amer. Med. Assoc., June 12, 1920.*

No one, I say, is conquered till he yields;
 And yield he need not, while like mist from glass
God wipes the stain of life's old fields
 From every morning that he brings to pass.

—James Buckham.

Doctor: There must be a lot of iron in your system.
Patient: Why do you think so?
Doctor: Because you lose your temper when you get hot.

Vigorous exercise in the open air not only promotes physical health, but also stimulates the brain and makes for mental alertness.

It is not always the one who speaks longest that says the most.

THE DOCTOR'S WIFE.

The night was dark and bitter cold.
The wind across the prairie swept,
While in comforts warm enrolled
Snored softly on and soundly slept.

When suddenly my doorbell rang—
Infernal sound! It pierced my ears,
As on the creaking floor I sprang,
My heart athrob with direst fears.

Lest one had come to call me out
Into the cold biting blast—
I for my garments cast about,
Wishing this night call was my last.

But oh, the best thought of my life!
It calms me now as oft before.
I'll send my thoughtful, faithful wife
To meet the stranger at the door.

She goes, and oh, the sweetest lies
That ever mortal tongue has told,
As in her artless way she tries
To say that I'm out in the cold.

"He won't be home till break of day
And then he'll come, poor tired man;
I'm awfully sorry he's away,
He'll come as promptly as he can."

I go to bed but not to sleep;
I ponder long on doctor's wives—
The only ones who ever think
Of our rest-broken weary lives.

I somehow think God doesn't record
Those little white lies often told
To give a wayworn doctor sleep,
Or save him from the winter's cold.

And if he does I'm sure his pen
Writes very near, in letter bright,
A tender thought of her who thinks
Of doctors, toiling in the night.

Dr. W. J. Bell.

□

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Only the useful survive.—*Estey.*

When in *doubt,* use the laboratory.

Are you getting eight hours sleep daily?

The law of survival is the law of coöperation.

Most of the indiscretions of youth are due to ignorance.

The "missing link" is not our ape-like ancestors, but God!—*Estey.*

There are fewer people who can endure success than there are who can endure failure.

The weather conditions should be the guide in determining the time to discard the "heavies"—not the calendar.

The season's greatest danger—that you will neglect the best spring tonic—the frequent use of the spade and rake.

An ancient philosopher said that good health and good sense are two of life's greatest blessings.

An Arabian proverb puts it this way: "He who has health has hope, and he who has hope has everything."

The transmission of diseases of the nose, throat and lungs are greatly facilitated by the insanitary habits of the people.

Remember always to smother your sneeze—
It may be loaded with germs of disease.

MORBIDITY REPORT FOR FEBRUARY, 1921.

Counties and Cities.	Tuberculosis	Typhoid and Paratyphoid	Smallpox	Diphtheria	Influenza	Scarlet Fever	Measles (morbilli)	German Measles (rubella)	Whooping Cough	Chickenpox	Mumps	Pneumonia (acute) (all forms)	Meningitis (epidemic)	Poliomyelitis (epidemic)	Other diseases (see Addenda)
The State	133	14	667	303	42	515	1599	5	218	213	85	163	5	4	305
Allen, except	2	0	0	4	0	3	1	0	0	0	1	1	0	0	0
Iola	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Anderson	0	0	0	2	0	3	7	0	0	0	0	4	0	0	0
Atchison, except	2	0	0	4	0	1	0	0	0	0	0	0	0	0	0
Atchison city	1	0	1	1	0	1	2	0	0	3	0	0	0	0	0
Barber	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Barton, except	0	0	5	8	0	7	1	0	1	1	0	2	0	0	0
Great Bend	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bourbon, except	0	0	13	9	0	0	0	0	0	0	0	2	0	0	0
Fort Scott	0	0	25	38	0	2	2	0	2	7	0	0	0	0	8
Brown	1	2	13	5	0	12	1	0	1	0	0	1	0	0	0
Butler, except	4	1	18	9	0	8	58	0	7	33	14	11	1	2	1
Augusta	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
El Dorado	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chase	0	0	0	0	0	0	4	0	0	1	0	0	0	0	0
Chautauqua*	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Cherokee, except	3	0	1	3	2	4	0	0	0	0	0	4	0	0	1
Galena	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cheyenne	0	0	2	1	0	3	1	0	0	0	0	0	0	0	1
Clark	0	0	3	0	0	5	0	0	0	0	0	0	0	0	1
Clay	0	0	0	1	0	7	31	0	1	1	0	1	0	0	1
Cloud, except	2	0	116	1	0	4	10	0	0	2	0	4	0	0	0
Concordia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coffey	1	0	0	2	0	4	36	0	0	1	0	1	0	0	0
Comanche*	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Cowley, except	0	0	1	2	0	7	16	0	2	9	1	6	0	0	12
Arkansas City	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Winfield	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crawford, except	3	0	2	9	2	6	25	0	0	2	0	1	0	0	0
Pittsburg	4	0	1	3	2	4	0	0	0	1	0	0	0	0	2
Decatur	1	0	65	0	0	4	0	0	0	5	0	2	0	0	1
Dickinson	1	0	11	4	0	14	1	0	0	1	0	1	0	0	2
Doniphan	0	0	1	2	0	10	0	0	0	0	0	0	0	0	1
Douglas, except	1	1	0	1	3	1	6	0	0	2	0	0	0	0	8
Lawrence	1	0	1	0	0	1	1	0	3	0	0	0	0	0	5
Edwards	0	0	0	0	0	5	1	0	0	0	0	0	0	0	0
Elk	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0
Ellis	0	0	0	3	0	5	5	0	0	0	0	0	0	0	0
Ellsworth	4	0	12	5	0	0	3	0	35	18	0	5	0	0	2
Finney	0	0	3	2	0	8	0	0	30	16	0	4	0	0	0
Ford, except	2	0	2	0	0	18	15	0	10	3	1	3	0	0	2
Dodge City	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Franklin, except	3	0	1	7	0	1	7	0	0	1	0	0	0	0	0
Ottawa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Geary, except	1	1	5	0	0	4	3	0	2	16	0	6	0	0	1
Junction City	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gove	0	0	0	0	0	0	46	0	0	0	0	0	0	0	0
Graham	2	0	28	0	0	6	6	0	0	2	1	0	0	0	0
Grant	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0
Gray	0	0	6	0	0	1	18	0	0	10	0	1	0	0	0
Greeley	0	0	3	0	0	0	0	0	0	1	1	0	0	0	0
Greenwood	2	1	4	5	5	2	14	0	0	0	0	4	0	1	2
Hamilton*	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Harper	0	0	0	1	0	4	2	0	1	11	6	2	0	0	0
Harvey, except	2	0	5	5	0	5	67	0	0	1	0	1	0	0	0
Newton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Haskell	0	0	2	0	0	0	21	0	0	0	0	0	0	0	0
Hodgeman	0	0	0	2	0	5	0	0	0	0	0	0	0	0	0
Jackson	0	0	0	3	0	8	5	0	0	1	0	1	0	0	0
Jefferson	0	0	0	0	0	0	1	0	0	0	0	4	0	0	2
Jewell	0	0	1	0	0	2	22	0	0	0	1	0	0	0	1
Johnson	12	0	0	5	4	3	1	0	0	4	0	2	0	0	2
Kearny	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Kingman	0	0	0	0	3	3	4	0	0	0	0	0	0	0	0
Kiowa	0	0	0	1	0	8	0	0	0	0	0	0	0	0	0
Labette, except	2	0	0	2	0	3	0	0	0	0	0	0	0	0	8
Parsons	0	0	14	5	1	2	0	0	0	2	1	1	0	0	7
Lane	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0
Leavenworth, except	0	0	4	6	0	7	1	0	0	5	0	1	0	0	0
Leavenworth city,	1	0	0	8	0	7	2	0	0	4	0	0	0	0	7

MORBIDITY REPORT FOR FEBRUARY, 1921—Concluded.

COUNTIES AND CITIES.	Tuberculosis	Typhoid and Paratyphoid	Smallpox	Diphtheria	Influenza	Scarlet Fever	Measles (morbilli)	German Measles (rubella)	Whooping Cough	Chickenpox	Mumps	Pneumonia (acute) (all forms)	Meningitis (epidemic)	Poliomyelitis (epidemic)	Other diseases (see Addenda)
Lincoln	0	0	0	0	0	1	0	0	29	1	0	1	0	0	0
Linn	0	0	7	3	0	4	0	0	0	6	0	3	0	0	0
Logan	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0
Lyon, except	0	0	1	6	0	4	28	0	0	7	0	0	0	0	0
Emporia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Marion	1	0	15	3	0	11	4	0	0	13	0	3	0	0	5
Marshall	0	0	36	1	0	9	0	0	2	2	0	0	0	0	1
McPherson	1	0	4	3	0	8	36	0	0	0	0	1	0	0	0
Meade	0	0	5	0	0	7	16	0	0	0	0	1	0	0	0
Miami	3	0	9	5	0	0	3	0	0	5	0	1	0	0	1
Mitchell	1	0	1	0	0	7	46	0	0	0	1	0	0	0	0
Montgomery, except	3	1	0	4	0	3	36	0	2	1	6	5	0	0	3
Coffeyville	0	0	0	3	3	1	0	0	0	2	0	1	0	0	2
Independence	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Morris	2	0	1	1	0	3	3	0	0	0	0	0	0	0	0
Morton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nemaha	0	0	0	2	0	2	0	0	0	0	0	0	0	0	1
Neosho, except	2	0	1	3	4	2	62	2	0	8	12	5	0	0	7
Chanute	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ness	0	0	0	0	0	7	1	0	0	1	0	2	0	0	0
Norton	3	0	4	0	6	0	0	0	0	1	0	0	0	0	0
Osage	0	0	0	0	0	1	9	0	0	2	1	1	0	0	0
Osborne	0	0	1	1	0	4	25	0	5	3	1	0	0	0	0
Ottawa	1	0	6	0	0	6	67	0	4	3	1	0	0	0	0
Pawnee	0	0	0	0	0	3	1	1	3	8	0	0	0	0	0
Phillips	0	0	4	0	0	6	5	0	0	0	0	1	0	0	0
Pottawatomie	0	0	0	2	0	10	7	0	0	0	0	0	0	0	0
Pratt	2	0	1	1	0	13	4	0	7	0	0	0	0	0	2
Rawlins	1	0	0	0	0	0	0	0	5	0	0	0	0	0	0
Reno, except	1	0	6	0	0	7	10	0	0	2	0	0	0	0	0
Hutchinson	0	0	12	9	0	15	36	0	0	15	0	2	0	1	2
Republic	0	0	23	0	0	2	0	0	6	4	0	5	0	0	1
Rice	0	0	19	2	0	8	1	0	17	3	0	0	0	0	0
Riley, except	1	0	6	1	0	3	16	0	3	0	0	1	0	0	0
Manhattan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rooks	0	0	18	1	1	6	11	0	0	0	0	0	0	0	0
Rush	0	0	0	0	0	5	44	0	0	0	0	1	0	0	0
Russell	0	0	13	0	0	0	60	1	9	2	0	0	0	0	0
Saline, except	0	0	1	1	0	4	11	0	2	0	0	0	0	0	0
Salina	1	0	5	8	2	7	22	0	0	4	0	1	0	0	0
Scott	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
Sedgwick, except*	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Wichita	12	1	22	23	1	33	196	1	11	24	5	10	2	0	37
Seward	0	0	5	1	0	33	0	0	0	0	0	0	0	0	0
Shawnee, except	2	0	1	1	1	1	9	0	0	0	0	1	0	0	2
Topeka	11	1	5	9	1	10	127	0	1	17	14	16	0	0	45
Sheridan	0	0	9	0	0	9	13	0	0	0	0	1	0	0	1
Sherman	0	0	22	0	0	0	0	0	0	4	6	1	0	0	0
Smith	0	0	0	0	0	0	40	0	4	2	3	0	0	0	0
Stafford	0	1	3	2	0	2	8	0	0	0	0	0	0	0	0
Stanton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stevens	0	0	0	2	0	0	0	0	0	1	0	0	0	0	0
Sumner, except	1	2	0	4	0	13	11	0	5	24	1	2	0	0	3
Wellington	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Thomas*	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Trego	0	0	2	0	0	0	11	0	0	1	0	1	0	0	0
Wabaunsee	2	0	1	0	0	0	9	0	0	0	0	1	0	0	0
Wallace	0	0	5	0	0	0	5	0	0	0	0	0	0	0	0
Washington	0	0	2	0	0	0	9	0	1	0	0	1	0	0	0
Wichita	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wilson	1	1	3	1	0	4	47	0	0	1	1	1	0	0	2
Woodson	0	0	7	0	0	4	59	0	0	0	0	1	0	0	0
Wyandotte, except,	4	0	1	6	0	0	2	0	1	1	0	0	1	0	1
Kansas City	19	1	9	25	0	11	33	0	6	29	6	16	1	0	30
Rosedale	0	0	0	0	0	0	0	0	0	0	0	0	0	0	81

* No report.

Other communicable diseases: Actinomycosis, 1; cancer, 17; chancroid, 11; erysipelas, 9; gonorrhœa, 126; lethargic encephalitis, 3; malaria, 2; pellagra, 1; septic sore throat, 2; syphilis, 133.

Report of Laboratory for February.

TOPEKA, KAN., March 2, 1921.

MEMORANDUM.
To: Secretary State Board of Health.
From: Public Health Laboratory.
Subject: Report of work done by Laboratory for the month of February, 1921.

	February.		*January.*	
1. Complement fixation test for syphilis—				
Blood specimens (from physicians):				
Positive	65		71	
Negative	306		303	
Doubtful	50		31	
Unsatisfactory	19		22	
Total		440		454
Blood specimens (from Doctor Axford at Lansing):				
Positive	23		31	
Negative	77		88	
Doubtful	26		18	
Unsatisfactory	3		1	
Total		129		138
Spinal fluid:				
Positive	3		3	
Negative	15		14	
Doubtful	1		1	
Total		19		18
2. Examination of sputum for tuberculosis:				
Positive	20		25	
Negative	89		119	
Unsatisfactory	4		9	
Total		113		153
3. Examination of cultures for diphtheria:				
Positive	19		23	
Negative	322		498	
No growth	58		111	
Unsatisfactory	...		4	
Total		399		636
4. Examination of smears for gonococcus (physicians):				
Positive	4		7	
Negative	36		19	
Unsatisfactory	2		2	
Total		42		28
From detention camp at Lansing:				
Positive	7		4	
Negative	80		102	
Unsatisfactory	6		1	
Total		93		107
5. Examination of Widals for typhoid fever:				
Positive	3		7	
Negative	4		4	
Unsatisfactory	3		1	
Total		10		12
6. Examination of stool cultures for typhoid fever:				
Positive	...		2	
Negative	4		4	
Total		4		6
7. Miscellaneous examinations:				
Examination for rabies	6		...	
Spinal fluid for meningococcus examination	2		...	
Swabs for meningococcus examination	3		...	
Ontogenous vaccine	1		...	
Pus from gland	1		...	
Pus from wound	1		...	
Bowel washing for tuberculosis	1		...	
Urine for tuberculosis examination	4		...	
Feces for tuberculosis	1		...	
Total		20		3
Totals		1,269		1,554

Report of Division of Water and Sewage.

FEBRUARY, 1921.

ALBERT H. JEWELL, Chief.

Permits Issued or Refused for Waterworks and Sewerage.

Date.	*Place.*	*Nature of improvement.*
Feb. 9	Glasco	Sewer extensions.
Feb. 12	Greenleaf	Water improvements.
Feb. 17	Lawrence	Water extensions.
Feb. 26	Salina Country Club	Sewerage and sewage disposal.

Final Inspections on Completed Work.

Feb. 5	Scott City	Sewer and sewage-disposal plant.
Feb. 9	Hugoton	Water supply.
Feb. 17, 18	Goodland	Sewer system and sewage disposal.

Plans for preliminary reports have been received or conferences have been held with municipal authorities for new work at the following places:

Anthony	Additional water supply.
Augusta	Mausoleum.
Burrton	Additional water supply.
Emporia	Water improvements.
Garden City	Additional water supply.
McPherson	Sewer extensions.
Manhattan	Water-softening plant.
Medicine Lodge	Conference on water supply and investigation of schoolhouse sewage.
Neodesha	Sewer extensions.
Osawatomie	Extensions to sewer system.
Oswego	Sewage disposal.
Ottawa	Water-purification plant.
Topeka	Water-filtration plant.
White Water	New water supply.
Wichita	Mausoleum.
Wichita	Water softening.
La Crosse	Additional water supply.

Inspections Made.

Date.	*Place.*	*Nature of inspection.*
Feb. 1	Wallace	Waterworks.
Feb. 1	Wa Keeney	City wells.
Feb. 1	Ellis	Water plant.
Feb. 2	La Crosse	City well.
Feb. 2	Utica	Waterworks system.
Feb. 4	Dighton	City water supply.
Feb. 5	Scott City	City wells.
Feb. 5	Horace	Water supply.
Feb. 7	Garden City	City water supply.
Feb. 7	Cimarron	City wells.
Feb. 8	Syracuse	Water supply.
Feb. 8	Elkhart	Water supply.
Feb. 9	Hugoton	City water supply.
Feb. 9	Liberal	Water supply.
Feb. 11	Dodge City	City water supply.
Feb. 11	Spearville	Water supply.
Feb. 12	Jetmore	Water supply.
Feb. 12	Kinsley	Water supply.
Feb. 14	Larned	Water supply.
Feb. 15	Great Bend	Water supply.
Feb. 15	Canton	Waterworks plant.
Feb. 17	Goodland	Water supply.
Feb. 17	Goodland	Rock Island private supply.
Feb. 18	Goodland	Sewer system.
Feb. 18	Phillipsburg	Water plant.

Record of analyses made in Water and Sewage Laboratory at Lawrence, during February, 1921:

	Bact.	*Chem.*	*Miscel.*
City supply	472	36	..
Bottled waters	3	..	..
Private supplies	22	..	..
Railroad supplies	20	..	..
Miscellaneous	1	..	..
Ice	11	..	..
Chlorides	..	..	2
Boiler water	..	2	..
Totals	529	38	2—569

Licenses Issued.

Date.	*Place.*	*Person or firm and purpose.*
Feb. 15	Anthony	Kansas Southwestern. City supply.
Feb. 15	Anthony	Santa Fe. City supply.
Feb. 23	Canton	Santa Fe. Private supply.
Feb. 23	Dighton	Santa Fe. City.
Feb. 15	Dodge City	Santa Fe. Private.
Feb. 15	Elkhart	Santa Fe. Private.
Feb. 4	Ellis	Union Pacific. Private.
Feb. 15	Englewood	Santa Fe. Private.
Feb. 4	Garrison	Union Pacific. Private.
Feb. 23	Great Bend	Santa Fe. City.
Feb. 15	Horace	Missouri Pacific. Private.
Feb. 10	Independence	Missouri Pacific. City.
Feb. 23	Jetmore	Santa Fe. Private.
Feb. 23	Kinsley	Santa Fe. City.
Feb. 23	Liberal	Rock Island. Prviate.
Feb. 4	Miltonvale	Union Pacific. Private.
Feb. 4	Minneapolis	Santa Fe. City.
Feb. 4	Oakley	Union Pacific. City.
Feb. 4	Sharon Springs	Union Pacific. City.
Feb. 15	Ottawa	Santa Fe. City. Certificate refused.
Feb. 4	Plainville	Union Pacific. City.
Feb. 4	Plainville	Union Pacific. Private supply.
Feb. 15	Scott City	Santa Fe. City.
Feb. 2	Arkansas City	Henneberry & Co. Manufactured ice.
Feb. 18	Cherryvale	Watkins Brothers. Manufactured ice.
Feb. 18	Concordia	Concordia Ice & C. S. Co. Manufactured ice.
Feb. 18	Dodge City	Electric Service Co. Manufactured ice.
Feb. 2	Kansas City	Armour & Co. Manufactured ice.
Feb. 18	Manhattan	Manhattan Gas & Elec. Co. Manufactured ice.
Feb. 18	Smith Center	McBrien Ice Co. Manufactured ice.
Feb. 2	Topeka	Beatrice Creamery Co. Manufactured ice.
Feb. 18	Topeka	Railways Ice Co. Manufactured ice.
Feb. 18	Topeka	Seymour Packing Co. Manufactured ice.
Feb. 18	Topeka	Chas. Wolff Packing Co. Manufactured ice.
Feb. 2	Wichita	Jacob Dold Packing Co. Manufactured ice.

Wanted.

"God give us men! A time like this demands
Strong minds, great hearts, true faith, and ready hands:
Men whom the lust of office does not kill;
    Men whom the spoils of office cannot buy.
Men who have opinions and a will;
    Men who have honor, men who will not lie;
Men who can stand before a demagog,
    And damn his treacherous flatteries without winking!
Tall men, sun-crowned, who live above the fog
    In public duty and in private thinking;
For while the rabble, with their thumb-worn creeds,
Their large professions and the little deeds,
Mingle in selfish strife—lo! Freedom weeps,
Wrong rules the land, and waiting Justice sleeps."

—*Dr. Josiah Gilbert Holland.*

Resolution in re Mausoleums.

WHEREAS, Chapter 85 of the Laws of Kansas of 1917 requires that all mausoleums, vaults or burial structures shall be constructed in accordance with plans which have been approved by the State Board of Health, and other provisions of the laws of Kansas authorize said board to adopt rules and regulations to make effective the statutes conferring health powers upon said board; and

WHEREAS, A thorough examination of structures in various states, shows that the existing rules and regulations should be revised: therefore, be it

Resolved, That the construction, maintenance and use of mausoleums, vaults, crypts or burial structures within the state of Kansas shall be governed by the following rules and regulations:

1. Any person, firm or corporation desirous of constructing any burial structure which shall be wholly or in part aboveground shall apply to the Kansas State Board of Health for a permit for such construction.

2. Application for permits for such construction shall be made on forms furnished by the State Board of Health and shall be accompanied by detailed plans and specifications, in triplicate.

3. On approval of said plans and specifications for the proposed burial structure by the engineer of the board, the secretary shall issue a permit in triplicate for the construction, and shall send two copies of the permit, approved plans and specifications to the party who makes application, and retain one copy for the files of the board.

4. Any person, firm or corporation desirous of using any burial structure as aforementioned for the purpose of interring or depositing therein any dead bodies shall not be permitted to use the same until there shall have been obtained from the Kansas State Board of Health a final certificate permitting such interment.

5. Application for permits for the use of a burial structure for interment shall be made to the board at least ten (10) days before it is desired to put the same into use, in order that the engineer of the board may make a final inspection to determine whether or not the work has been constructed in accordance with the plans and specifications as submitted.

6. On the final approval of the building by the engineer of the board, the secretary shall issue a permit in triplicate for the use of said building for the interring or depositing therein of dead bodies, and shall send two copies of the permit to the party who makes application, and retain one copy for the files of the board.

7. In the design of burial structures the following details must be included:

   a. The structure must be so designed that each cell or crypt shall be readily accessible for inspection by persons authorized to make such inspection before final interment.

   b. Each crypt shall be so designed that it can be sealed to prevent odors from reaching the public space or corridor of the mausoleum.

Each crypt shall be provided with a ventilation and drainage system acceptable to the board. Ventilation or drainage from one crypt shall not pass through another. The minimum size of pipes for either ventilation or drainage to be one and one-half inches in diameter.

c. No live air spaces smaller in size than will allow for thorough inspection and repairing of joints from the inside of said air spaces will be allowed, except the pipes for ventilation and drainage of crypts.

d. Hollow walls shall be sealed so as to make the air space "dead."

e. Any burial structure intended for public or community use shall be provided with some type of heating system acceptable to the board.

f. In the case of public mausoleums, or those with a corridor or chapel, suitable ventilation, independent of the above and directly connected to the outside air, shall be provided.

g. Special attention will be given to such details as: Depth and width of foundations; size and spacing of reinforcing steel; materials and method used in construction of roof; permanence of material used for exterior of walls as determined by test for absorption of moisture; materials used for window and door sash, grills, gates, etc.; materials and method used in anchoring or tying of walls together where they are made up of two or more independent walls; materials for concrete, plaster, mortar, etc.

Kansas—A Dream State.

By W. A. White.

In the heart of Kansas is a spiritual tuning fork. Upon it the events of contemporary history fall, and Kansas gives key to the tune that runs through the world.

Kansas probably does not lead; Kansas originates only deeds. Kansas acts after the spirit of the country has thought long and become restive because no action has culminated from a multitude of counsels.

John Brown was no sage. Hundreds of men for centuries had cried out against slavery. John Brown struck out against slavery and the institution fell. He led nothing, but he followed gloriously. In prohibition Kansas has acted only after the nation had frittered away half a century in idle talk about the useless waste of the saloon. In the long line of social, political and economic reforms—the old Populist protest against plutocracy, which became respectable in the first decade of the century—Kansas worked out things which others had thought out. In the Great War, while the other states were clamoring for the hostilities to begin, Kansas filled her quota of naval enlistment first and sent out her army enlistments earlier than the clamoring states.

Kansas never broods over things, never spins fine theories. Kansas is no "lean and hungry Cassius."

Kansas sees what others see—the common-sense thing—and then performs her plain duty. She has worked out here a dream state—a commonwealth where justice is more nearly done to man in all relations of life than it is done any other place in the world. Here we have fewer rich and fewer poor and more well-to-do than are found in any other group of 1¾ million people on the globe. We have established a democracy so well adjusted that the man who is ill fed, ill clad, ill housed or idle from excess or poverty is so rare that he is regarded almost as a criminal. The average man is developed to a marvelous degree. For him the state does everything humanly possible in our present state of intelligence.

The state prints the child's school books at cost, looks after his teeth, his health, his morals and gives him free a college education. When he is a citizen the state protects his bank deposits, looks after his investments, regulates the price of his light, water, gas, transportation and communication by phone or telegraph; the state regulates the hotels wherein the citizen stops at night, builds and controls the wagon roads upon which he travels by day; the state grades his wheat, inspects his groceries, standardizes and purifies his water, his milk, his oil, his gasoline. Then, after licensing the doctor who steers him out of life and the undertaker who tucks him under the Kansas sod, the state regulates the company that pays his widow the life insurance. It is indeed a "dream state"—but most practical. It works, and works well.

But Kansas did not dream it out. For centuries those dreams had been in the heart of man. Thinkers had builded Utopias out of their wrongs for generations, and yet the wrongs persisted. Kansas did nothing more than to replace human wrongs with human rights. Just now Kansas is going ahead with another great human problem, thinking little, but acting strongly. Industrial peace, and the equal rights of labor to work and capital to its interest, form a problem. The other states are finding an active, earnest, practical endeavor in Kansas to solve the problem.

Kansas is the child of a race of pioneers, not a race of dreamers. The "dream state" we have erected is upon the visions of other minds, other generations, other seers. Kansas offers small encouragement to seers; she is no house of refuge for theorists; but if a two-fisted practical man with a workable plan to produce justice and good will comes ambling up the Kaw valley he is met by a brass band. Nothing in Kansas is too good for him.

John Brown's sturdy, practical soul is in our hearts. Henry Allen's blue print of industrial peace, based upon industrial justice, is a picture Kansas can paint. For all our "dream state," we are not ourselves dreamers.—*Emporia Gazette.*

Wasteful Policy.

"Now see what we have done," growled the city comptroller. "We have spent a lot of money preparing for an epidemic of contagious disease, and, by George! we haven't had a single case or a death to show for it. If we could have had a good-sized epidemic it would have been easy enough to justify our public expenditures in the eyes of the people."

"I am quite satisfied to pay my share of this public loss," commented the intelligent taxpayer.

Child Research in Kansas.

In 1914 the Ohio legislature established, by statute, a juvenile research bureau, but did not make an appropriation for it until 1916, when it appropriated over $100,000. This bureau was designed to act as a clearing house through which all defectives and delinquent child wards of the state might pass for the purpose of study and diagnosis. The idea developed out of the fact that it had become apparent that all the state children's institutions were cluttered up with mentally retarded and mentally defective children who were impeding administration and defeating the ends of the respective institutions, since such a child could neither be reformed, educated or placed in a family home.

This being the most pressing problem as recognized at that time, Dr. Henry Goddard, superintendent of the famous colony for mental defectives at Vineland, N. J., was made director of the bureau. The achievement of the bureau and the lines of its development are summed up by Doctor Goddard in a letter to the secretary of the Kansas Children's Code Commission, as follows:

"The original plan was that the bureau should be merely a clearing house and that its main work would be the picking out of the feeble-minded so that they would not get into the reformatories. It will be seen, however, that under the law it was possible, and, as a matter of fact, the bureau is developing into a state department of child husbandry, analogous to the department of animal husbandry, the department of agriculture and the like. Even the function of clearing house has proved to be vastly greater than was anticipated since it is found that the children sent in by the juvenile courts are not simply feeble-minded or normal, but there are as many children who are psychopathic as are feeble-minded, and the disposition of the psychopathic child is a very serious problem.

. . . .

"There would be some distinct advantages in having the bureau under the same control as the state university, where the requirements for scientific work are fully appreciated. This will probably be still more emphasized when it comes to carrying out our plan of establishing biochemical, neurological and histological work for these children, for we believe they should be studied by every means known to science, to the end that we should not only be able to settle the social phase of the question, but that we should get valuable information as to the physical conditions underlying abnormality and subnormality and antisocial conduct.

"For example, we are finding a considerable percentage of congenital syphilis among our cases. This should be studied both from the standpoint of origin and treatment and possible cure as well as prevention. As our name implies, we are an institution for research in its broadest meaning. In establishing such a bureau as this I believe every effort should be made to keep away from the idea that it is for defectives only. It should be, as I have intimated, a state department for the benefit of all parents and their children. Just as a farmer can write in to the state department and inquire what is the matter with his hogs or what is the best kind of wheat to plant in his locality, so any parent should feel free to bring his child to the bureau for examination and advice, and it may be for no other reason than simple curiosity to know whether the child is as normal as he is thought to be. We are doing very much of this work and it is proving to be of the highest value. Every little while such a child is brought in as a matter of curiosity and is found to be slightly psychopathic. Then advice and warning to the parents is sufficient to enable them to change his work in school, so that instead of going on toward a breakdown he is saved. We also examine for the public school in localities where such work is not yet started as a local matter. We have established our own clinic in two cities. Others will follow.

"While the main part of the work will be correction until the present crop of feeble-minded and psychopaths are largely picked out, the bureau should as fast as possible develop into a great institution for the prevention of child troubles and misdemeanors, and to that end, as already implied, should be organized on as liberal a basis as possible and intrusted to the care and direction of the best experts available."

The next state to enter the field of child research was Iowa, which in 1917 established at the university a child-welfare research station. This was established with a yearly appropriation of $25,000, to which the National Woman's Christian Temperance Union now contributes a yearly bonus of $10,000. The Iowa station was established for the avowed purpose of studying only the problems of the average or normal child.

Since it is difficult to draw a line of demarcation between the strictly normal and the strictly abnormal, the Ohio juvenile research bureau is drifting rapidly toward a study of the problems of the average child life of the state, and the Iowa research station finds itself studying speech defects and other deviations from the normal.

The Kansas Children's Code Commission studied both plans, and borrowed from both, but added to this a unique feature, viz., that of coördinating all the research groups in the state and virtually making of the state a huge laboratory for the study of child life, chiefly at first hand, with a minimum of transportation of children, for the purpose of study either singly or in groups.

The child research bureau bill was one of the most important of the twenty-three Children's Code Commission bills which were presented to this session. It enjoys the distinction of being the only one to pass unamended, and is one of the three code bills passed.

It is a short bill and carried no appropriation. Of course, extensive and effective research cannot be carried on without money, but it is believed that even without an appropriation the following things will be possible:

1. Conference of the heads of all groups now doing child research, with the establishment of working relationships.
2. The working out of a joint program which will utilize to the utmost all existing facilities, avoid duplication, and provide an organic, growing program for the future.
3. Selection, through joint conference, of the problems which promise the earliest and most valuable returns.
4. The assembling of data already worked out by research groups in other states and distributing it to the people of the state.
5. The authorization of this work by statute will give it publicity and standing and make for coöperation.
6. Certain research problems can be carried on at once through organized coöperation. As an example, the home economics department of the University, the Division of Child Hygiene of the State Board of Health, and the State Training School for Mental Defectives at Winfield last year carried on a study of the dietary and physical condition of the inmates of the school, which resulted in 11 per cent mass gain in weight in one year, with marked improvement in general health.

KANSAS CHILD RESEARCH LAW.

AN ACT to establish a bureau of child research at the University of Kansas.

Be it enacted by the Legislature of the State of Kansas:

SECTION 1. That there shall be established at the University of Kansas a bureau of child research for the purpose of studying the problems of the child life of the state, including studies as to the diagnosis, treatment and prevention of delinquency, defectiveness and dependency; studies in normal inheritance, development and training; studies of family and community life in their relation to child life.

SEC. 2. That the bureau shall have its administrative offices at the University of Kansas, but it may receive the aid and coöperation of the staff, equipment and research students of any and every state school, hospital and institution, and any other school, hospital or institution in the state, to the extent that such aid and coöperation may be proffered by the research departments of these various schools, hospitals and institutions and in so far as those may be suited to the use of the bureau.

SEC. 3. That the bureau shall have a director, who shall be appointed by the Board of Administration on the recommendation of the chancellor of the University. The director shall be chosen on a basis of his knowledge of some phase of child research and on a basis of his peculiar fitness to direct the diversified research of the bureau. The bureau shall be provided with such personnel and equipment as may from time to time be determined to be necessary.

SEC. 4. That this act shall take effect and be in force from and after its publication in the statute book.

Items.

For the past five years Kansas has been the envy of other states because Kansas had a health car. Several states have borrowed the idea from Kansas, and the State Board of Health during the present session of the legislature received an invitation to bring the car to Des Moines to demonstrate its value to the Iowa legislature in order that it might consider the matter of making an appropriation for a similar purpose.

In its zeal for economy the Kansas legislature saw fit to discontinue the appropriation for the car, and it will have to be returned July 1, 1921, after having carried a health message to 200,000 children and thousands of parents and other citizens.

No longer will its "wooden dolls," so contemptuously ridiculed by one of the "gentlemen" of the house, carry their message of fresh air, exercise, right food, right clothing, etc., to the receptive minds of the school children of the state.

No longer will the model school lunches intrigue both teacher and mother. No longer may the mother who is many miles from a public-health nurse bring her baby to have it weighed and examined and get advice and literature.

No longer may the tubercular suspect see models showing him just how to arrange open-air quarters and receive printed instruction and advice.

All this will have to go, and the people of the state will have been saved one-sixth of one cent apiece each year.

One member of the house even offered to personally give $2,000 of the $3,000 asked rather than have the services of the car discontinued. This would have reduced the sum to one-eighteenth of one cent per capita. But we must economize!

The appropriation for the Division of Child Hygiene remains stationary at $7,500 per year, although the work of the division has developed steadily until it is now in the plight of a lusty six-year-old child which must still wear its two-year-old clothes. Although it was the second division to be established, it still has one of the very smallest appropriations of any of the thirty-six state divisions of child hygiene now in operation.

The little state of New Jersey appropriated $125,000 for its division of child hygiene in 1919 and considered the money so well invested that it raised this to $150,000 in 1921.

Kansas continues its munificent appropriation of two and one-half cents per child for health protection to mothers and children—the price of a postage stamp and half a stick of gum per child. To raise this generous allowance every person in the state contributes less than one cent every two years.

The Duty of Being Right.

A Newark judge has fined a father the sum of $1,000 for not obtaining medical treatment for his nine-year-old daughter, ill with diphtheria. The child died, and a jury had already brought in, first a verdict of criminal negligence, and then a verdict of manslaughter. The father happened to be a Christian Scientist, but the case has a wider range than the limits of a single type of religious belief. There have been other cases of parents, not Christian Scientists, who through ignorance of the efficacy of the antitoxin treatment for diphtheria, have been criminally negligent in not having instant recourse to the injections. Doctors have sometimes attacked vaccination as a preventive of smallpox, but no voice has been raised against the antitoxin; it works miracles, and any one who out of his general scepticism toward materia medica fails to take advantage of the treatment is criminally negligent.

The decision of the jury states clearly the fact that a man is not exonerated because he does that which he thinks is right. The responsibility is upon him of being right.

In imposing the sentence the judge said: "I am satisfied from the evidence in this case that your failure to secure medical aid for your daughter during her illness arose from a conscientious belief on your part of the efficacy of the treatment recognized by the Christian Science Church, of which you are a member. However, in the light of present-day science, which is the result of many years of progressive experiment and demonstration, no one is justified in neglecting the use of such agencies as have been shown to be efficient in the treatment of malignant and contagious diseases."

In cases like this the doctrine of the freedom of opinion no longer holds. Public welfare demands that a man shall conform his action to accord with the benefit of the whole.—*New Haven Register.*

Danger from Flies Recognized by Court.

The supreme judicial court of Maine has decided (*William v. Sweet*, 110 Atl. 316) that a guest who had contracted for a two weeks' stay at a hotel was justified in leaving before the expiration of the two weeks when the dining room was infested with flies.

A contract was entered into for a two weeks' stay at a hotel. After three or four days the guests left, paying the regular transient rate for the time they had been at the hotel. The reason assigned for leaving was that the flies in the dining room constituted a nuisance and were dangerous to health. No complaint was made regarding other conditions at the hotel.

The proprietor sought to recover for the full two weeks' stay contracted for, and he succeeded in the lower court. But the supreme court granted the motion of the defendant for a new trial, holding that the guests were justified in leaving the hotel for the reason that they did. The opinion treats at great length of the dangers of the fly and quotes from the public-health literature on the subject.—*Public Health Reports.*

Contrary March.

When March comes in like a lion,
    Roaring, growling;
Wind on the hill loud and shrill,
    Wind in the meadow howling;
Big trees tossed by the lashing gale
Right and left, like a lion's tail;
Bushes shaken in road and lane,
Tawny and wild like a lion's mane,
With a scratching of claws and a padding of paws—
Fierce and furious though he be,
    He's going out like a lamb.
You just watch and see!

When March comes in like a lamb,
    Gentle, easy,
Just a breath over field and heath,
    Wagging and warm and breezy;
Soft buds bobbling all down the trail,
Short and white as a lambkin's tail;
Hedges and ledges blooming full,
Fluffy and fair as a lambkin's wool,
With a frisk of feet and a musical bleat—
March will never remain like that.
    He's going out like a lion;
Hold on to your hat!

—*Nancy Byrd Turner, in Youth's Companion.*

Professor—When you have finished lecturing, bow gracefully and leave the platform on tiptoe?

Student—Why on tiptoe?

Professor—So as not to wake the audience.

The Six Best Doctors.

The six best doctors anywhere—
And no one can deny it—
Are Doctors Sunshine, Water, Air,
Rest, Exercise and Diet.

These six will gladly you attend,
If only you are willing;
Your mind they'll clear, your ills they'll mend
And charge you not one shilling.
—*With apologies to the author of*
"The Five Best Doctors."

A Story of the Front.

The hobo knocked at the back door, and the woman of the house appeared.

"Lady, I was at the front—"

"Poor man!" she interrupted. "Wait till I give you some food, and then you shall tell me your story." After she had given him a hearty meal she anxiously inquired, "What brave deed did you do at the front?"

"I knocked," he replied, meekly, "but couldn't make nobody hear, so I came around to the back."

The cost of the war is represented by a pretty long line of figures, but it really is a small matter when compared with the cost of disease.

The house fly is a modest cuss,
He never seeks for fame;
He has no bus'nes in the soup,
But he gets there just the same
—*Journal A. M. A.*

"No, sah, ah doan't neber ride on dem things," said an old colored lady looking in on the merry-go-round. "Why, de other day I seen dat Rastus Johnson git on an' ride as much as a dollah's worth an' git off at the very same place he got on at, an' I sez to him: 'Rastus,' I sez; 'yo' spent yo' money, but whar yo' been?' "

There is a serene Providence which rules the fate of nations, which makes little account of time, little of our generation or race, makes no account of disaster, conquers alike by what is called defeat or by what is called victory, thrusts aside enemy and obstruction, crushes everything immoral as inhuman, and obtains the ultimate triumph of the best race by the sacrifice of everything which resists the moral laws of the world. It makes its own instruments, creates the man for the time, trains him in poverty, inspires his genius, and arms him for his task.—*Emerson in "Abraham Lincoln."*

THE MAN WHO QUITS.

The man who quits has a brain and hand
As good as the next; but he lacks the sand
That would make him stick, with a courage stout,
To whatever he tackles and fight it out.

He starts with a rush, and a solemn vow
That he'll soon be showing the others how;
Then something new strikes his roving eye,
And his task is left for the bye and bye.

It's up to each man what becomes of him;
He must find in himself the grit and vim
That bring success; he can get the skill,
If he brings to the task a steadfast will.

No man is beaten till he gives in;
Hard luck can't stand for a cheerful grin;
The man who fails needs a better excuse
Than the quitter's whining "What's the use?"

For the man who quits lets his chances slip,
Just because he's too lazy to keep his grip.
The man who sticks goes ahead with a shout,
While the man who quits joins the "down and out."

—Charles R. Barrett in the University News.

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OF THE
Kansas State Board of Health

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S. J. CRUMBINE, M. D., Editor

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Has your back yard had its spring cleaning?

Now is the time when all good people swat the fly.

The unflyproofed, insanitary outside toilet is a sanitary crime.

Whooping cough is a dangerous disease in children under five years of age.

As the typhoid season approaches, the thoughts of people of wisdom and foresight turn to plans for vaccination.

Missouri is to be congratulated; her legislature increased her public-health appropriation 300 per cent.

The tuberculosis clinics conducted by the State Tuberculosis Association have uncovered hundreds of cases of incipient tuberculosis. Good work.

The Annual School for Health Officers and Public Health Nurses will be held at the School of Medicine, Rosedale, Kan., May 16 to 20, inclusive.

MORBIDITY REPORT FOR MARCH, 1921.

COUNTIES AND CITIES.	Tuberculosis.	Typhoid and Paratyphoid	Smallpox	Diphtheria	Influenza	Scarlet Fever	Measles (morbilli)	German Measles (rubella)	Whooping Cough	Chickenpox	Mumps	Pneumonia (acute) (all forms)	Meningitis (epidemic)	Poliomyelitis (epidemic)	Other diseases (see Addenda)
THE STATE	185	13	756	246	50	461	2255	15	187	481	81	123	7	0	287
Allen, except	12	0	0	1	4	3	2	0	0	0	1	0	0	0	0
Iola	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Anderson	0	0	2	0	0	5	0	0	0	0	0	0	0	0	0
Atchison, except	0	0	0	0	0	1	0	0	0	1	0	1	0	0	0
Atchison city	1	0	0	0	4	11	1	0	0	11	0	1	0	0	6
Barber	0	0	0	2	0	0	4	0	0	0	0	0	0	0	1
Barton, except	0	0	15	6	1	7	40	0	15	2	1	2	0	0	0
Great Bend	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bourbon, except	1	0	20	3	0	1	2	0	0	1	0	0	0	0	2
Fort Scott	0	0	32	25	0	3	1	0	3	0	0	0	0	0	11
Brown	0	0	2	10	0	3	17	0	0	2	0	2	0	0	0
Butler, except	1	0	13	10	1	10	54	0	0	54	10	7	1	0	3
Augusta	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
El Dorado	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chase	0	0	2	1	0	0	0	2	0	2	0	3	0	0	2
Chautauqua*	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Cherokee, except	1	0	3	1	0	4	4	0	1	0	0	2	0	0	12
Galena	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cheyenne	0	0	18	1	0	3	0	0	0	0	0	0	0	0	0
Clark*	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Clay	2	2	9	1	0	1	68	0	0	10	0	0	0	0	0
Cloud, except	1	0	37	0	0	9	5	0	1	1	0	0	0	0	5
Concordia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coffey	0	0	4	1	0	1	15	0	6	0	0	0	0	0	0
Comanche*	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Cowley, except	4	0	2	0	0	14	47	0	2	8	1	8	0	0	22
Arkansas City	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Winfield	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crawford, except	4	0	5	10	1	0	52	0	3	0	0	0	0	0	2
Pittsburg	0	0	4	0	0	5	9	0	0	2	0	0	0	0	10
Decatur	1	0	13	3	0	7	4	0	0	1	0	2	0	0	2
Dickinson	2	0	23	3	4	10	7	0	0	1	0	0	0	0	0
Doniphan	1	0	14	0	0	0	2	0	0	1	0	3	0	0	3
Douglas, except	2	0	0	0	0	0	2	0	3	0	0	0	0	0	0
Lawrence	9	0	1	1	0	4	5	2	5	0	0	0	0	0	2
Edwards	0	0	0	0	0	7	3	0	0	1	0	0	0	0	0
Elk	0	0	0	1	0	3	0	0	1	0	0	0	0	0	0
Ellis	1	0	2	3	0	3	11	0	0	0	0	0	0	0	0
Ellsworth	0	0	17	0	0	3	8	2	12	2	1	1	0	0	2
Finney	1	0	2	3	0	4	1	0	11	13	0	0	0	0	1
Ford, except	11	0	1	0	0	4	45	0	10	7	3	0	0	0	0
Dodge City	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Franklin, except	0	0	15	2	0	2	15	0	0	1	0	0	0	0	0
Ottawa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Geary, except	1	2	6	24	0	8	1	5	2	21	0	0	0	0	6
Junction City	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gove	0	0	0	2	0	0	91	0	0	0	0	0	0	0	0
Graham	1	0	5	0	0	1	9	0	0	2	3	0	0	0	0
Grant	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Gray	0	0	0	0	0	0	0	0	6	6	1	2	0	0	0
Greeley	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0
Greenwood	0	0	1	2	5	3	18	0	0	0	0	2	0	0	0
Hamilton	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Harper	0	0	2	4	0	3	27	0	4	6	7	1	0	0	0
Harvey, except	1	0	4	1	0	3	26	0	0	10	0	0	0	0	1
Newton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Haskell	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0
Hodgeman	0	0	0	1	0	5	14	0	0	0	0	0	0	0	0
Jackson	0	0	0	0	0	1	10	0	0	0	0	1	0	0	0
Jefferson	2	0	3	0	0	1	1	0	0	2	0	2	0	0	1
Jewell	0	0	8	0	0	3	15	0	0	0	1	1	0	0	1
Johnson	2	0	0	1	0	7	3	0	0	2	0	1	0	0	0
Kearny	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0
Kingman	0	1	1	2	0	2	5	0	0	0	0	0	0	0	0
Kiowa	0	0	0	0	0	1	3	0	0	1	0	0	0	0	0
Labette, except	1	0	3	1	0	2	0	0	0	1	0	0	0	0	13
Parsons	2	0	5	3	0	0	1	0	0	1	0	0	0	0	10
Lane	0	0	0	0	0	0	4	0	5	0	0	0	0	0	0
Leavenworth, except	0	2	2	2	0	1	1	0	0	5	0	2	0	0	0
Leavenworth city,	0	0	0	9	0	2	25	0	2	8	0	1	0	0	5

MORBIDITY REPORT FOR MARCH, 1921—Concluded.

COUNTIES AND CITIES.	Tuberculosis.......	Typhoid and Paratyphoid.....	Smallpox..........	Diphtheria........	Influenza.........	Scarlet Fever......	Measles (morbilli)........	German Measles (rubella)......	Whooping Cough...	Chickenpox........	Mumps..........	Pneumonia (acute) (all forms).......	Meningitis (epidemic)......	Poliomyelitis (epidemic).......	Other diseases (see Addenda)...
Lincoln	2	0	1	0	0	1	3	0	21	1	0	3	0	0	1
Linn	0	0	1	0	0	7	6	0	0	1	0	1	0	0	0
Logan*	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Lyon, except	2	0	0	2	0	5	18	0	0	9	0	2	0	0	0
Emporia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Marion	1	0	5	1	0	3	11	0	0	9	1	5	0	0	4
Marshall	1	0	19	0	0	5	6	0	0	1	0	0	0	0	0
McPherson	2	0	15	1	0	1	12	0	1	0	0	0	0	0	0
Meade	0	0	0	2	0	0	3	0	0	0	0	0	0	0	0
Miami	2	0	15	6	0	2	0	0	0	2	0	0	0	0	0
Mitchell	2	0	10	1	0	0	51	0	0	8	1	1	0	0	0
Montgomery, except	1	1	8	5	0	5	59	1	4	1	0	3	0	0	1
Coffeyville	1	0	3	2	4	1	2	0	0	2	0	5	1	0	1
Independence	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Morris	1	0	5	4	0	12	3	0	0	0	0	0	0	0	0
Morton	0	0	0	2	0	1	3	0	0	1	0	0	0	0	0
Nemaha*	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Neosho, except	0	0	2	2	2	1	61	0	1	0	8	2	0	0	2
Chanute	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ness	0	0	6	0	0	4	10	0	0	0	0	0	0	0	0
Norton	1	0	1	2	0	4	5	0	0	4	0	0	0	0	0
Osage	2	0	2	0	0	4	17	0	0	1	3	2	0	0	2
Osborne	0	0	0	0	0	1	20	0	0	0	0	0	0	0	0
Ottawa	1	0	5	1	1	8	68	0	2	1	0	0	0	0	0
Pawnee	1	0	0	0	0	6	64	0	1	7	16	1	0	0	0
Phillips	0	0	8	0	0	4	9	0	0	1	0	1	0	0	0
Pottawatomie	25	0	0	1	11	4	56	0	0	0	0	0	0	0	0
Pratt	1	0	2	0	0	6	8	0	10	1	0	0	0	0	1
Rawlins	0	0	0	0	4	5	0	0	1	1	0	0	0	0	0
Reno, except	0	0	20	0	0	9	5	0	0	1	0	0	0	0	0
Hutchinson	1	0	31	6	0	15	30	1	0	19	0	1	0	0	1
Republic	11	0	12	2	0	3	4	0	6	0	0	2	0	0	1
Rice	2	0	40	3	0	5	6	0	6	4	0	2	0	0	1
Riley, except	1	0	3	0	1	17	9	0	1	3	0	0	0	0	4
Manhattan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rooks	1	0	10	0	0	3	6	0	0	0	0	0	0	0	0
Rush*	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Russell	0	0	2	0	0	1	20	0	0	3	0	0	0	0	0
Saline, except	0	0	29	2	0	4	5	0	0	0	0	0	0	0	0
Salina	0	0	28	0	0	7	10	0	1	1	0	0	0	0	3
Scott	0	0	5	0	0	0	2	0	0	0	0	0	0	0	0
Sedgwick, except*	0	0	0	3	0	8	15	0	0	4	0	1	0	0	0
Wichita	6	1	41	21	1	32	575	0	13	41	2	10	2	0	38
Seward	0	0	3	0	0	8	4	1	0	0	0	0	0	0	1
Shawnee, except	0	0	6	0	0	0	7	0	0	0	0	0	0	0	0
Topeka	20	3	17	4	0	27	57	0	3	85	8	10	0	0	28
Sheridan	0	0	4	2	0	6	18	0	0	3	0	0	0	0	0
Sherman	2	0	21	0	0	1	1	0	0	2	7	1	0	0	0
Smith	0	0	1	2	0	6	81	0	1	0	1	0	0	0	1
Stafford	0	1	2	0	0	3	7	0	1	0	0	0	0	0	2
Stanton*	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Stevens	0	0	0	0	0	0	25	0	0	0	0	0	0	0	0
Sumner, except	3	0	1	0	0	12	70	0	14	20	1	5	0	0	3
Wellington	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Thomas*	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Trego*	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Wabaunsee	1	0	0	2	5	1	12	0	0	0	0	0	0	0	0
Wallace	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0
Washington	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
Wichita*	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Wilson	0	0	30	1	0	1	26	0	1	1	1	1	0	0	0
Woodson	0	0	4	1	0	3	0	0	0	0	0	0	0	0	0
Wyandotte, except,	1	0	0	4	0	0	3	0	1	0	0	0	0	0	0
Kansas City	24	0	41	21	1	18	80	1	6	56	3	18	3	0	69
Rosedale	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

* No report.

Other communicable diseases: Cancer, 18; chancroid, 8; erysipelas, 14; gonorrhoea, 148; lethargic encephalitis, 4; malaria, 1; pellagra, 1; septic sore throat, 3; syphilis, 90.

Food Analysis Report.

K. S. A. C. FOOD LABORATORY, NOVEMBER, 1920, TO APRIL, 1921.

H. H. KING, *Director.* ROBERT DEROSE, *Analyst.*

73035. Milk. McAdow Dairy, Atchison. Fat, 3.2 per cent.

73036. Milk. McAdow Dairy, Atchison. Fat, 3.1 per cent. Illegal.

73037. Milk. McAdow Dairy, Atchison. Fat, 3.1 per cent. Illegal.

73038. Milk. McAdow Dairy, Atchison. Fat, 3.3 per cent. Passed.

81399. Milk. C. S. Summers, Sterling. Fat, 4.0 per cent; total solids, 14.09 per cent; solids not fat, 10.09 per cent.

81398. Milk. Retailer, W. Sledd & Co., Sterling. Manufacturer, W. W. Partington, Sterling. Fat, 1.9 per cent; total solids, 8.10 per cent; solids not fat, 5.20 per cent. Watered.

81397. Milk. Retailer, W. Sledd & Co., Sterling. Manufacturer, W. W. Partington, Sterling. Fat, 1.8 per cent; total solids, 6.95 per cent; solids not fat, 5.15 per cent. Watered.

81396. Cream. Retailer, Jess Nickum, Sterling. Manufacturer, E. E. Potter, Sterling. Fat, 19.4 per cent. Passed.

93519. Hamburg. The Boston Market, K. C., Kan. No preservative present.

93520. Weiners. The Boston Market, K. C., Kan. Sulphite present. Illegal.

93521. Hamburg. B. A. Jackson, K. C., Kan. No preservative.

93522. Hamburg. J. W. West, K. C., Kan. Sulphite present. Illegal.

93523. Hamburg. Consumer's Meat Co., K. C., Kan. No preservative.

93524. Hamburg. Retailer, R. B. Cathers, Topeka. Manufacturer, Wolff Packing Co., Topeka. No preservative. Moisture, 71.93 per cent.

93525. Minced Sausage. Retailer, G. A. Shearer, Topeka. Manufacturer, Cudahy Packing Co., Topeka. Nitrates present.

93526. Minced Sausage. Retailer, G. A. Shearer, Topeka. Manufacturer, Cudahy Packing Co., Topeka. Nitrates present.

93539. Salt peter. J. W. West, K. C., Kan. Contained sodium sulphite. Illegal.

93541. Salt peter. Retailer, The Boston Market, K. C., Kan. Manufacturer, Enterprise Chem. Co., Chicago. No sulphites.

93542. Iceine Brine. Retailer, The Boston Market, K. C., Kan. Manufacturer, Enterprise Chem. Co., Chicago. No sulphites.

22888. Oleo. Nucoa Nut. Retailer, Hindman, Topeka. Manufacturer, Nucoa Butter Co., Chicago. Fat, 81.55 per cent; moisture, 13.46 per cent; curd, 1.17 per cent; salt, 3.82 per cent. Sodium benzoate, trace.

22889. Oleo. Richnut. Retailer, Hindman, Topeka. Manufacturer, Harron-Taylor Butter Co., K. C. Fat, 80.31 per cent; moisture, 14.12 per cent; curd, 1.95 per cent; salt, 3.62 per cent. Sodium benzoate, 0.09 per cent. Contained cocoanut and palm-nut oil.

22890. Oleo. Gem Nut. Retailer, Wm. Green & Son, Topeka. Manufacturer, Swift & Co. Fat, 82.16 per cent; moisture, 11.52 per cent; curd, 2.64 per cent; salt, 3.68 per cent. Contained cocoanut and peanut oil and trace of cottonseed oil.

22891. Oleo. Lily. Retailer, W. Green & Son, Topeka. Manufacturer, Swift & Co. Fat, 81.10 per cent; moisture, 11.20 per cent; curd, 2.24 per cent; salt, 4.06. Contained cocoanut, palm-nut, cottonseed and vegetable oils.

22892. Oleo. Premium. Retailer, Wm. Green & Son, Topeka. Manufacturer, Swift & Co. Fat, 83.64 per cent; moisture, 10.82 per cent; curd, 2.55 per cent; salt, 3.28 per cent. Contained cottenseed, palm-nut and vegetable oils.

22893. Oleo. Troco. Retailer, Wm. Green & Son, Topeka. Manufacturer, Troco Nut Butter Co., Powling, N. Y. Fat, 83.47 per cent; moisture, 10.04 per cent; curd, 1.99 per cent; salt, 4.50 per cent. Contained vegetable oils and trace of palm-nut oil.

22894. Oleo. (Nut Margarine, Extra Quality). Retailer, Owl Grocery, Topeka. Manufacturer, Kansas District No. 2. Fat, 81.25 per cent; moisture, 13.33 per cent; curd, 1.86 per cent; salt, 4.85 per cent. Contained cottonseed and vegetable oil.

22895. Oleo (Nut Margarine, Fox River Maid). Retailer, Exchange Grocery, Topeka. Manufacturer, Fox River Butter Co. Fat, 85.17 per cent; moisture, 10.34 per cent; curd, 1.82 per cent; salt, 2.67 per cent. Chemical preservative, sodium benzoate. Contained cottonseed and vegetable oil.

22896. Oleo. Silver Nut. Retailer, Exchange Grocery, Topeka. Manufacturer, Armour & Co., Chicago. Fat, 86.28 per cent; moisture, 10.31 per cent; curd, 4.64 per cent; salt, 3.35 per cent. Contained cocoanut and peanut oils.

22897. Oleo. Kokoheart. Retailer, Exchange Grocery, Topeka. Manufacturer, Morris & Co. Fat, 80.39 per cent; moisture, 14.31 per cent; curd, 2.28 per cent; salt, 3.01 per cent. Contained cocoanut, palm-nut and vegetable oils.

22898. Buckwheat Flour. Sent by A. J. Brughman, Larned. Manufacturer, Blair Milling Co., Atchison. Fat, 2.20 per cent: moisture, 11.08 per cent; ash, 1.75 per cent; protein, 10.29 per cent; fiber, 2.76 per cent. Passed.

22899. Sweetened Condensed Milk. Retailer, Wm. Green & Son, Topeka. Manufacturer, Borden & Co., N. Y. Fat, 8.80. Passed.

22903. Cheese. Retailer, Dibble Gro. Co., Topeka. Distributor, Ridenour-Baker Gro. Co., K. C. Mo. Fat, 36.60 per cent; moisture, 32.42 per cent; ash, 2.92 per cent; protein, 28.25 per cent.

22906. Cheese. Retailer, Wm. Green & Son, Topeka. Manufacturer, H. J. Banford, Plymouth Rock, Wis. Fat, 35.40 per cent; moisture, 33.16 per cent; ash, 3.52 per cent; protein, 24.51 per cent.
22907. Cheddar Cheese. Retailer, Wm. Green & Son, Topeka. Distributor, Sprague, Warner Co., Chicago, Ill. Fat, 34.80 per cent; moisture, 31.64 per cent; ash, 3.65 per cent; protein, 27.75 per cent.
22908. Brick Cheese. Retailer, Wm. Green & Son, Topeka. Manufacturer, Badger Cheese Co., Monroe, Wis. Fat, 29.60 per cent; moisture, 36.69 per cent; ash, 3.8 per cent; protein, 28.58 per cent.
22909. Cheese. Retailer, Wm. Green & Son, Topeka. Manufacturer, Ridenour-Baker, K. C., Mo. Fat, 30.00 per cent; moisture, 37.24 per cent; ash, 4.63 per cent; protein, 25.08 per cent.
22910. Cheese. Retailer, Wm. Green & Son, Topeka. Manufacturer, Martin Bros., Denver, Colo. Fat, 30.00 per cent; moisture, 38.08 per cent; ash, 3.70 per cent; protein, 23.27.
22911. Cheese. Retailer, Wm. Green & Son, Topeka. Manufacturer, J. L. Kraft & Bro. Co., Chicago, Ill. Fat, 34.50 per cent; moisture, 36.32 per cent; ash, 3.86 per cent; protein, 25.40 per cent.
22912. Cheese. Retailer, Wm. Green & Son, Topeka. Manufacturer, Behle Bros., Rolling Prairie, Wis. Fat, 31.50 per cent; moisture, 50.33 per cent; ash, 2.24 per cent; protein, 20.10 per cent.
22913. Cheese. Retailer, Wm. Green & Son, Topeka. Manufacturer, Behle Bros., Rolling Prairie, Wis. Fat, 18.50 per cent; moisture, 51.81 per cent; ash 2.67 per cent; protein, 17.66 per cent.
22914. Cheese. Retailer, Wm. Green & Son, Topeka. Manufacturer, Behle Bros., Rolling Prairie, Wis. Fat, 28.50 per cent; moisture, 48.66 per cent; ash, 2.90 per cent; protein, 18.73 per cent.
22915. Sausage. Sent by Mrs. Chas. Molter, Liberal, Kan. Evidently made in part from bacon ends.
22921. Ice Cream. Frey & Hedges, Leavenworth. Fat, 7.5 per cent. Illegal.
22922. Ice Cream. Frey & Hedges, Leavenworth. Fat, 11.63 per cent. Illegal.
22923. Ice Cream. Leavenworth Creamery Co., Leavenworth. Fat, 9.35 per cent. Illegal.
22924. Ice Cream. Busy Bee Candy Kitchen, Leavenworth. Fat, 14.66. Passed.

Drug Analysis LXI.

L. E. SAYRE, Director; L. D. HAVENHILL, Chief; C. M. STERLING, Microscopist; G. N. WATSON, Analyst.

The seven classes of drugs and preparations sent to this laboratory by inspectors through the office of Board of Health have been examined, with the following results:

SPIRIT OF CAMPHOR.

Lab. No. 7576. Insp. No. 72072. Yuel Drug Co., Almena. Contained 10.62 grams of camphor per 100 mils. Passed.
Lab. No. 7584. Insp. No. 50275. John Claypool, Williamsburg. Contained 7.6 grams of camphor per 100 mils. Substandard.
Lab. No. 7585, Insp. No. 50274. Smith & Hall, Princeton. Contained 6.5 grams of camphor and 13 per cent added water per 100 mils. Adulterated.

ESSENCE OF GINGER.

Lab. No. 7573. Insp. No. 72069. W. T. Stevenson, Oberlin. Contained alcohol, 91.15 per cent. Solids, .287 gm. 100 mils. Deficient in solids. Adulterated.

SPIRIT OF NITER.

Lab. No. 7572. Insp. No. 72068. D. G. Addleman, Oberlin. Contained 3.05 per cent ethyl nitrite.
Lab. No. 7578. Insp. No. 72074. Thompson and Jeffers, St. Francis. Lost in transit.
Lab. No. 7581. Insp. 72077. H. L. Paden & Co., Atwood. Contained 3.42 per cent ethyl nitrite.

ACETYL SALICYLIC ACID (ASPIRIN) TABLETS.

Lab. No. 7555. Insp. No. 50240. Mrs. J. G. Cuddy, Lincoln. Contained 5.1 grains. Passed.
Lab No. 7557. Insp. No. 50242. City Drug Store, Lucas. Contained 4.9 grains. Passed.
Lab. No. 7558. Insp. No. 50243. The Lamer Pharmacy, Salina. Contained 4.77 grains. Passed.
Lab. No. 7559. Insp. No. 50244. National Drug Store, Salina. Contained 4.9 grains. Passed.
Lab. No. 7560. Insp. No. 50245. National Drug Store, Salina. Contained 4.86 grains. Passed.
Lab. No. 7561. Insp. No. 50246. Neal Pharmacy, Salina. Contained 4.8 grains. Passed.
Lab. No. 7567. Insp. No. 50258. Supple and Carby, Solomon. Contained 4.77 grains. Passed.

ESSENCE OF PEPPERMINT.

Lab. No. 7550. Insp. No. 72063. D. Von Riesen, Marysville. Contained 10.46 mils. oil per 100. Passed.
Lab. No. 7565. Insp. No. 72065. D. B. Harsh, Seneca. Contained 7.82 mils. oil per 100. Substandard.
Lab. No. 7571. Insp. No. 72067. Rexall Drug Co., Norton. Contained 12.06 per cent oil. Above standard.

TINCTURE OF IODIN.

Lab. No. 7548. Insp. No. 72060. J. H. Ellis, Highland. Contained 4.64 gm. iodin and 3.94 gm. potassium iodide per 100 mils. Substandard.
Lab. No. 7551. Insp. No. 22772. Red Cross Pharmacy, Leavenworth. Contained 4.34 grams potassium iodide and 5.97 grams iodin per 100 mils. Substandard.
Lab. No. 7564. Insp. No. 72064. D. B. Harsh, Seneca. Contained 6.72 gm. iodin and 4.75 gm. potassium iodide per 100 mils. Passed.
Lab. No. 7569. Insp. No. 22778. Adolph Lange, Leavenworth. Contained 4.93 gm. potassium iodide and 6.35 gm. iodin per 100 mils.
Lab. No. 7574. Insp. No. 72070. C. E. Brower, Norcatur. Contained 6.96 gm. iodine and 4.84 gm. of potassium iodide. Passed.
Lab. No. 7575. Insp. No. 72071. C. E. Brower, Norcatur. Contained 6.36 gm. iodin and 4.71 gm. potassium iodide. Passed.
Lab. No. 7577. Insp. No. 72073. Thompson and Jeffers. St. Francis. Contained 6.34 gm. iodine and 4.58 gm. potassium iodide. Passed.
Lab. No. 7579. Insp. No. 72075. J. H. Egan. St. Francis. Contained 6.70 gm. iodin and 4.89 gm. potassium iodide. Passed.
Lab. No. 7580. Insp. No. 72076. D. C. Cashman, Atwood. Contained 6.88 gm. iodin and 4.65 gm. potassium iodide. Passed.

CAMPHORATED OIL.

Lab. No. 7570. Insp. No. 72066. Nyal Drug Store, Norton. Contained 22.6 per cent camphor. Above standard.

Report of Public Health Laboratory, March, 1921.

TOPEKA, KAN., April 2, 1921.

MEMORANDUM.

To: Secretary State Board of Health.
From: Public Health Laboratory.
Subject: Report of work done by Laboratory for the month of March, 1921.

1. Complement fixation test for syphilis:

Blood specimens from physicians:	*March.*		*February.*	
Positive	124		65	
Negative	346		306	
Doubtful	45		50	
Unsatisfactory specimens	20		19	
Totals	——	535	——	440

Blood specimens from Doctor Axford at Lansing:				
Positive	34		23	
Negative	25		77	
Doubtful	13		26	
Unsatisfactory specimens	8		3	
Totals	——	80	——	129

Spinal fluid:				
Positive	1		3	
Negative	12		15	
Doubtful	...		1	
Totals	——	13	——	19

2. Examination of sputum for tuberculosis:

Positive	37		20	
Negative	147		89	
Unsatisfactory	1		4	
Totals	——	185	——	113

3. Examination of cultures for diphtheria:

Positive	25		19	
Negative	168		322	
No growth	17		58	
Unsatisfactory	1		...	
Totals	——	211	——	399

4. Examination of smears for gonnococcus—from physicians:				
Positive	10		4	
Negative	40		36	
Unsatisfactory	5		2	
Totals		55		42
Examination of smears for gonococcus—from Lansing:				
Positive	2		7	
Negative	84		80	
Unsatisfactory	1		6	
Totals		87		93
5. Examination of Widals for typhoid fever:				
Positive	7		3	
Negative	11		4	
Unsatisfactory	2		3	
Totals		20		10
6. Examination of stool cultures for typhoid fever:				
Positive	...		...	
Negative	1		1	
Totals		1		1
7. Miscellaneous examinations:				
Urine for tuberculosis examination	4		...	
Stool specimen for tuberculosis examination	2		...	
Blood count	1		...	
Wound culture	1		...	
Pus examination	1		...	
Smear for Vincent's angina	2		...	
Swab from tonsil	1		...	
Examinations for rabies	3		...	
Smear for actinomucosis	2		...	
Slide for bacteriological examination	2		...	
Totals		19		20
Totals		1,206		1,269

Annual School for Physicians, Health Officers and Public Health Nurses.

The Annual School for Physicians, Health Officers and Public Health Nurses will be held at the School of Medicine of the University of Kansas, Rosedale, May 16 to 20, inclusive.

The forenoons will be devoted to clinics, given at the Bell Memorial Hospital and the dispensary by the school faculty, and the afternoons will be devoted entirely to the public-health program.

The public-health nurses will have their own special program in the forenoons, joining with the health officers in the afternoon public-health program.

Sanitarians and health officers of national reputation will be the instructors for the entire week.

Clinics covering fields of interest to the general practitioner and a large and interesting clinic devoted to the diagnosis and modern treatment of venereal diseases will be especially worth-while features of this year's school.

Every health officer and public-health nurse in the state is expected to attend, and a general invitation is extended to the physicians of the state.

The course is given without charge.

Hotel headquarters will be at the Coates House, Kansas City, Mo.

Fatigue.

By Dr. Hugo Muench.

In these enlightened days, when the proud father of the family stays home from church on Sunday mornings to tinker with the flivver, there are mighty few of us who don't know enough about machinery to tell the spark plug from the radiator and use profusely illustrated language while trying to get an undersized tire on an oversized rim. True, we don't think of our bodies as machines. But they have all the essentials of the most complicated motor cars. And, speaking of fatigue—did you ever have your Lizzie lie down and go to sleep when you were trying to make the 5:15? Oh, man!

Fatigue is caused by two things: First, the using up of the power that is in the muscle which is working; second, the poisons which are produced by the action of the muscle. The first is the simplest to understand.

You know that if the fuel pipe on your car is clogged up, so that the motor isn't getting enough gas, it won't run to any large extent. And if the gasoline is of worse quality than usual, so that the carburetor can't break it up, the motor won't develop its full power. And, of course, if you run out of gas, that's as far as you go.

Just the same way, if the fuel pipes to the muscles are clogged; if we cut off the circulation from the muscles by tight clothes, so that the arteries can't bring them their supply of energy as quickly as it is needed, they will tire much more quickly than they otherwise would. One grade of gasoline will give your flivver more "pep" than another. Some forms of food can be used for energy much more easily than others. Sugar gives us energy which can be used at once, while it takes longer to change other foods into a form in which they can be burnt up. If you eat a lot of sugar you are immediately ready for a long, hard job. That's the reason why men in the army had such an appetite for chocolate, and why children, who use much more energy per pound of weight than grown-ups, have such a craving for sweet things.

If there is not gasoline enough in our tanks—if we are almost starved, and the energy which the muscles need simply isn't there—we can do mighty little before we're tired out.

The other cause of fatigue is the poison which is produced by the action of the muscles. To understand this we must know something about what goes on in the muscle when it works. You know that the products of a motor's action are poisonous—the exhaust gas will choke both folks and automobiles if enough of it is breathed in.

Well, a muscle contains a substance which is called glycogen, and which furnishes its fuel. The muscle itself has only enough of it to last a short time, and it must then be replaced from the body's great glycogen storehouse, the liver. When this glycogen is used up in doing work, two main things are produced: carbon dioxide and lactic acid. Carbon dioxide is always produced when burning goes on. The lactic acid is a complicated substance, which is also found in sour milk. Neither of them is poisonous in itself, but they depress the muscle if they accumulate—they fill the cylinders full of carbon.

There are also some other poisons which we have not yet traced out. We know that these poisons exist, because the tiring out of one muscle will tire all the others, even though they have not been used. And if an animal which has been thoroughly fatigued is killed and its blood is injected into another, this second animal will become tired, even though it has done no work.

An Italian gentleman by the name of Mosso invented a machine, somewhere around 1890, which he called the "ergograph," or "work recorder." This instrument is arranged so that we can make one muscle (the one which bends the middle finger) lift a weight many times in succession, and record the height to which it is lifted each time. We still use this apparatus, and have learned a number of interesting things from it.

You know that as a motor warms up it gets more powerful, until it gets too hot. The "ergograph" shows that at first the contractions of a muscle get stronger for a short time before they get weaker. A good deal depends upon the speed of the work. A flivver in good working order which is not overloaded will not overheat, no matter how long it is run. A muscle which is working slowly enough does not get fatigued. The poisons form so slowly that the blood can carry them off as they form, while it can keep the muscle supplied with fuel.

If your motor is run at too great a load you know that it will begin to overheat and knock. In the same way, a muscle which works so hard that the blood can't carry away poisons as quickly as they form gets tired. The motor has to rest to get cool, and the muscles must rest to recover from its fatigue; in other words, to give it time to get rid of the poisons. If you start up your motor again before it has cooled you are liable to injure it. If you work a muscle before it has rested it will take a much longer time to recover finally.

If your cooling system is not working properly you know that you can drive farther by going slow; just as you can do more actual work in the end by taking it easier and giving the muscle time to recover while it is working. In this way the poisons do not accumulate fast enough to produce a state of fatigue. The normal heart rests long enough between beats to get rid of its poisons and acquire new energy, so that it never gets tired. It is only when it is overworked continually that it tires out.

So far we have been talking only of muscles. The nervous system works in pretty much the same way. The storage battery of your car runs down if it is used faster than it is recharged. The connecting wires, though, don't show any signs of tiring.

In the cells of the brain there are certain small bodies which are called "Nissl granules." When the brain is fatigued these disappear, but come back when the cells are rested. They are evidently stored-up nourishment, and correspond to the glycogen in the muscles. The nerves themselves do not seem to get tired at all under ordinary conditions. The amount of energy they use is so small that the poisons they produce are easily gotten rid of. When it is made impossible for the nerve to get rid of these poisons, however, it will show fatigue after a time.

Our senses are tired out after a while, too, if they are stimulated continually by the same thing. When we enter a room we may smell an odor which escapes us after we have been in the room for some time. If we stare long enough at some object it turns gray and blurs. A monotonous sound grows fainter until finally we are deaf to it altogether. We don't feel the pressure of the clothes we always wear—and so forth.

Pain is a warning to us that something is wrong with our bodies which needs attention. It is a wise life-saving provision of nature. If it were not for pain we should be burning and cutting and eating ourselves to death several times a day.

Fatigue also gives us a warning, in the shape of "that tired feeling." Sometimes we heed it—then again we don't. It is one of the great blessings and curses of our race that our will power can overcome many purely physical hindrances.

A muscle which has been stimulated by an electric shock until it is so tired that it will contract no longer, will come to attention and get back to work at the summons of a stimulus from the brain. Like Scaevolus, the Roman who forced his hand to remain in the fire until it was consumed, we can whip our flagging bodies to renewed effort until even the commanding brain must give in. Sadly enough we often do just that. That's why we have so many "nervous wrecks," so much alcohol and drug taking. We tire ourselves so much that our bodies cannot recover without the help of artificial stimulation. After all, old Scaevolus was the sensible man—for he lost only a hand.—*North Carolina Health Bulletin.*

The Dangers of Ascariasis.

Dr. B. C. Crowell's article published in *The American Journal of Medical Sciences* (from *The Lancet,* June 26, 1920).

Though serious complications due to the *Ascaris lumbricoides* have from time to time been recorded, this most prevalent of all animal parasites is not usually regarded as a source of danger. In the *American Journal of the Medical Sciences* Dr. B. C. Crowell shows that the dangers are considerable and are overlooked because the word of the pathologist is seldom heard on the subject. Experience of several years in the necropsy room at Manila has led him to this conclusion. In the Philippine Islands as many as 62 per cent of the population have been found infested, and in some places the percentage is much higher. Large numbers of worms may be present in the intestine, producing masses which cause ileus. Cases are recorded in which as many as 600 worms were passed in one day. Whether the ascaris can perforate the intact intestine is unsettled. Doctor Crowell has seen several cases in which it opened up a repaired wound of the intestines, determining fatal peritonitis. Hence the importance of using vermifuges in ascariasis when abdominal operations of choice are to be performed. Migration into the biliary passages must be more frequent than is indicated by the reports, as it is only in cases of operation or necropsy that the diagnosis is made. Leer has stated that ascarides are the second most frequent cause of hepatic abscesses. These are usually multiple, and the pus is very foul. In one case reported by Doctor Crowell there were three large ascarides in the hepatic ducts, the largest of which extended to the surface of the right lobe of the liver. The common duct was distended and occluded by the folded bodies of two full-grown ascarides, and one protruded from the papilla of Vater. There were thrombosis of the splenic vein and acute hemorrhagic pancreatitis. Migration of the ascaris to the stomach and œsophagus and expulsion by the mouth or nose is frequent. But the parasite may pass into any of the connected canals or cavities—nasal sinuses, lacrymal duct, Eustachian tube, larynx and trachea. In the larynx it may cause alarming symptoms, and even suffocation. Toxic and reflex symptoms, such as fever, nausea, abdominal pain, convulsions, tetany, delusions, symptoms simulating meningitis, may occur in ascariasis. Proof of the connection is furnished by their disappearance after successful treatment of the infestation. In the horse and pig ascaris Flury found toxic substances (volatile aldehydes of the fatty acids), which cause irritation and necrosis. A nitrogenous substance, which after subcutaneous injection in the dog causes death with severe hemorrhages in the intestine, was also found. Doctor Crowell has observed the case of a Filipino, aged eight years, who was seized by vomiting, followed by pain in the chest and knees. Oedema, jaundice, melæna, hemorrhage from the gums, and ecchymoses on the face and legs soon developed. The patient became very anemic and died at the end of six days. The necropsy revealed 150 ascarides in the stomach and intestines, purpura hemorrhagica with hemorrhage into the stomach and intestines, and epicardial, pleural, retropleural, and retroperitoneal hemorrhages. Another source of danger is the larvæ of the ascaris. It has recently been shown by Major F. H. Stewart, I. M. S., and others that on administering the eggs of *Ascaris suilla* to the pig, rat, mouse or guinea pig, they hatch in the intestine, and the larvæ enter the blood stream, pass through the liver and heart to the lungs, where they migrate from the capillaries into the alveoli, and thence through the bronchi and trachea to the pharynx. During this process pneumonia may be set up. There is reason to believe that similar changes may be produced in man by the *Ascaris lumbricoides*.

Notice!

ANIMAL HEADS SENT TO THE LABORATORY FOR EXAMINATION FOR SUSPECTED RABIES.

Notice is hereby given that all animal heads shipped for examination for suspected rabies should be sent to the veterinary department of the State Agricultural College, at Manhattan. It is not designed that these specimens be examined in the Public Health Laboratory of the State Board of Health, although a great many specimens are sent to that laboratory, oftentimes arriving in such a badly decayed condition that it is impossible to make a proper examination.

It is better practice to tie up dogs, or other animals that are suspected of having rabies, to watch the development of the disease, which will be very clearly marked in a short time if rabies is present.

If a head is shipped for examination to any laboratory, it should be carefully packed in ice so as to prevent decomposition, sending the same to the Veterinary Department, K. S. A. C., Manhattan, Kan.

Wild Oats.

"Ah, let them alone—" 'tis the age-old cry—
"Boys will ever be boys, you know;
They must plow the world to the rim of youth,
Their fields of wild oats they must sow.
Let them alone—they are immune
To leash of straight-laced moral code.
Boys will be boys; they measure life
By laws that license has bestowed."

This is the hectic creed of the years,
The damning lie that parents preach
To ease their conscience of the blame
For higher goals they failed to reach.
Immune, these sowers of wild-oat tares?
There's never a single garnered field
Where sickles of sorrow have cut their swaths
But tells its tale of a misery yield.

Go, look in the wards where the maniacs rave,
Their brain cells brimmed with liquid fire
Through mad misrule of uncurbed wills
Or the blight of a foul desire.
And count, if you can, the blameless hosts—
The waifs unfathered and unnamed—
Who, under the light of God's blue sky,
Must live their cheated lives ashamed.

And, ah! the "drunks" and the derelicts
Lined day by day at the judge's bar,
And the man who limps on a shriveled limb—
A horrible, visible moral scar!
And the frightened girl with her shame revealed
Leaping down where the moonbeams quiver,
Her epitaph but the scornful line:
"A floater dragged from the river."

And the men hard-lipped and filled with fear
As they slip from the doctor's door,
Hiding his verdict of loathsome taint—
(O, the wives who must pay that score!)
Hating the secret noisomeness
That saps with its creeping ills,
Hating the wild oats that they sowed
In the lustful pace that kills.

These are the boys who "would be boys,"
Not held to straight-laced moral code.
The boys who measured their golden youth
By laws that license had bestowed.
They tread the trail where the serpent crawled
And are slimed with its vicious stain,
They plow their oats with the plow of sin
And reap with the sickle of pain.

L'Envoi—

And the gleaners who come in the after years—
Generation born under that spell!
In taint of body and smirch of soul
They garner an endless hell!

—*Sara Beaumont Kennedy.*

A "Sewer" Classic.

OBITUARY—C. V. SEWER.

C. V. Sewer was conceived in this city on March 24, 1919, and died at the city hall here on Thursday night, November 20, 1919, at the immature age of seven months, 25 days, 23 hours and 59 seconds.

Mr. Sewer is a graduate of the old school of public health and a staunch enemy of all the flies in the world. He is survived by many brothers, one at Sedan, Belle Plaine, Cottonwood Falls, to say nothing of his many sisters in live little towns with a population of from 500 to 1,000. As an appreciation of his demise many of his enemies placed handsome boquets of sour grape blossoms and dandelions on his grave.

The funeral was conducted from city hall, Mayor J. L. Borroum being in charge of the ceremonies. The pallbearers were Councilmen Stone, Cox, Aley, Whartenby and Phillips. At the grave a few short, silent remarks were made by the pallbearers, and the only friend present was the editor of *The County Liner*, who is reconciled to the fact that Mr. Sewer would never have been a welcome resident of the city.

A mixed quartet sang a very pathetic little ditty at the grave. It was entitled "Shoo Fly, Don't Bother Me." The quartet was composed of Mr. Case Typhoid, Miss Cess Pool, Mr. Out House and Mrs. Pure Water. So good was their rendition of this melodious melody that they responded to an encore, which was, "Hush, Little Black Fly, Don't You Cry; You'll Cause Summer Complaint By and By."

Relatives have requested that we announce that Mr. J. R. Marsh dug the grave.

CARD OF THANKS.

I wish to sincerely thank all my friends who said they were friendly to Mr. Sewer to my face, then cussed me when my back was turned. My hide is tough as sole leather and I am willing to take all the blame. Perhaps I may some time be on the winning side when a city improvement is up for controversy. While I thought the town needed Mr. Sewer, I find that we can get along very well without him.—A. AIRVENDER.

—*The County Liner and Cedar Vale Commercial.*

[EDITORIAL NOTE.—The editor of the *Liner* is a far-visioned, patriotic citizen, who has a very clear conception of relative values.]

Should Prophylactic Drops be Used in the Eyes of the New Born?

Out of 107 children in the State School for the Blind at Kansas City, Kan., 26, or approximately 25 per cent, lost their vision because of ophthalmia neonatorum, which is usually, if not always, caused by gonorrhœal infection in the eyes of the newborn. This form of blindness can be prevented by using prophylactic drops supplied to the physicians of the state by the State Board of Health, which is a solution of one per cent silver nitrate.

The Modern Health Crusade.

How *well* are you? It is easy to recognize the fact that the person with "poor health" is badly handicapped. Yet you and I excuse ourselves for poor efforts and results if our physical condition is bad. We seem to regard illness, not as the result of neglect or ignorance on our parts, but as a kind of visitation of a mysterious Providence. I have even heard an old lady use this argument for tuberculosis: "Consumption's powerful nice tu die uv, it gives ye sich a long time to prepar."

Have you more health than you can use? Can you teach school all day and feel equal to enjoying an evening out, without having that "morning-after" feeling the next day which makes you unfit to earn your salary? Isn't there something wrong if you are unequal to a reasonable amount of diversion and are you getting as much out of life as you ought or putting enough into your work, unless you are fit?

Did you ever have a habit? And did it ever trip you up when you least expected it? Or, have you any habits that are really helpful—that your subconscious mind uses to promote your efficiency? You don't have to remember to "bat" your eye if something comes toward it suddenly. You may call that instinct—but it is largely habit acquired from experience. In fact, most of your daily acts are habits—aren't they?

If you could only *remember*, you would do many things that you know you should do for your health. If you had done them often enough and early enough in life, they would have become habits. "Second nature" would then be guiding you to a large degree, toward good physical condition with its resultant mental alertness and exuberance of spirits—things which no money can buy, but which are the largest factors both in your earning capacity and usefulness.

If all of your pupils had enough sleep in well ventilated rooms, and ate easily digested, nutritious food, wouldn't they be easier to teach? And wouldn't they make better grades? If all of them were clean, all the time, wouldn't they be pleasanter to be with?

How many of you have pupils who are wiggly—or dull—or just plain bad, as a result of what we call "nerves"?

. . . .

Do your children copy you? Of course they do. What *you* tell them is usually the thing they believe and try to follow—even against the advice of their parents. If you believe in health, they will believe in it also. For your sake as well as that of your school, I would like to suggest a way to make good health easy and attractive.

The Modern Health Crusade, a comparatively new movement, is sweeping the country. It is a system of teaching health habits by doing a few simple health chores every day. The boys and girls keep their own scores, preferably at home (so that the parents may get some training, too), and a certain number of credits are allowed for each rule kept.

A passing grade of 75 per cent is required for the aspiring Crusader to gain each successive rank. One need not, therefore, be a superman to advance to the final one of knight banneret. If some rules are forgotten—

all is not lost. A small boy whose mother questioned him about the fourth set of bath towels which he was getting one sunny spring Saturday, replied, "Well—I've been so busy this week I forgot a lot of my chores and it cut down the class average so bad that the kids jumped all over me. And, mother," he sniffed, "you get two credits for each bath, and I've just *got* to take five more to-day to make up before I go back to school." Could the teaching of health in any other form have had such an effect on a small boy?

All of the "chores" are simple fundamentals of health which have been passed upon by child health experts and which any child can keep. They cover sleep, food, exercise and cleanliness, and help to build a firm foundation for a happy and vigorous life.

State and city school systems are allowing credits for rank acquired in the Crusade, and teachers everywhere are finding it a big impetus to all forms of health teaching because of its personal application. Experience with the Crusade as a system of teaching has proved that it does establish habits of good health.

In order to introduce and establish the Crusade, state tuberculosis associations have been and are providing supplies to the schools, although many schools now finance their own supplies, for the cost of a thirty-week course, including the necessary insignia, is about seven cents per pupil.

A roll of health knighthood, with spaces for forty names, is hung on the wall, where it shows from time to time the advancing rank of the Crusaders. A chore record for each pupil, which has upon it the chores and spaces for checking each day for a period of ten weeks, is necessary to begin with. If you have gone over the general plan, which is simplicity itself, you can explain it to the pupils in your own way so that they will readily understand.

Let them devise the best manner of memorizing the chores. The game of being healthy—and its play aspect, with a story of the Crusaders of old, should be emphasized, as well as the dignity of citizenship, in performing the simplest duties. It can be related well to studies of every grade. The time for conferring the advanced ranks can be utilized in numerous ways to add interest to regular studies, and should be invested with ceremony. Officials elected from rows or grades should take over most of the detail, and row, room and school spirit aroused and maintained by competition.

A real rivalry and school spirit are soon developed, so that the lazy or careless or spoiled child feels the "public" opinion of his school and learns that physical unfitness should rank with mental unfitness, if it can be corrected.

The Crusader learns how and why to be well and soon "gets the habit" of remaining so. He is put on the road to happiness and usefulness—and as he goes he teaches the public which we cannot reach that H-E-A-L-T-H spells happiness.—*Bulletin of the National Tuberculosis Association.*

Kansas has 130,000 children of school age enrolled in the Modern Health Crusade. The work is under the direction of the Modern Health Crusade Director, Kansas State Tuberculosis Association, Topeka, Kan., who welcomes inquiries.

Items from Reports of Free Dental Inspections.

The reports on free dental inspections received from school teachers and superintendents of schools have not as yet been completely tabulated, but a summary of the defects found in the first 6,820 reports examined and tabulated would seem to be a sufficient number to fairly represent general averages for the state.

Forty-three per cent of the pupils examined were found to have cavities in one or more of their temporary teeth, and 66 per cent of the pupils examined were found to have one or more cavities in their permanent teeth.

May not a large number of cases of malnutrition found in school children be closely associated with, or be caused in part, at least, by the numerous cases of tooth decay?

Total number tabulated	8,620
Total number of pupils having cavities in temporary teeth	3,705—43%
Total number of pupils having cavities in permanent teeth	5,718—66%
Total number of cavities in temporary teeth	12,867
Total number of cavities in permanent teeth	11,785

Some Big Little Pests.

By H. W. Duncanson.

The fly, the louse, mosquito and flea
Are as bad a lot as they can be;
Their manners are bad their bite is worse;
They carry contagion to man as a curse.

Typhoid and typhus, malaria and plague,
They carry about in a way not vague;
They gather up germs on soles of their feet,
To spread them about wherever they eat.

They do not originate, that's not the plan,
But act as a carrier from man to man;
Protect all the people from pests like these
Contagion will die—as fear of disease.

—*Journal of Health and Sanitation.*

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Now is the time when all good citizens SWAT THE FLY!

The milk of human kindness will not sour in hot weather.

Look well to the garden; it will help that "tired feeling."

The love of a mosquito for a bare arm is only surpassed by the love of a fly for a bald head.

The spirit of play must enter into and be a part of recreation and exercise if the best results are to be attained.

The Tuberculosis Section of the Kansas Public Health Association has placed the entire state in its debt for the many tuberculosis and other clinics established.

Public sentiment is everything. With public sentiment, nothing can fail; without it, nothing can succeed. Consequently he who molds public sentiment goes deeper than he who enacts statutes or pronounces decisions. He makes statutes and decisions possible or impossible to be executed.—*Abraham Lincoln.*

MORBIDITY REPORT FOR APRIL, 1921.

COUNTIES AND CITIES.	Tuberculosis	Typhoid and Paratyphoid	Smallpox	Diphtheria	Influenza	Scarlet Fever	Measles (morbilli)	German Measles (rubella)	Whooping Cough	Chickenpox	Mumps	Pneumonia (acute) (all forms)	Meningitis (epidemic)	Poliomyelitis (epidemic)	Other diseases (see Addenda)
THE STATE	339	14	744	185	46	344	2524	3	221	551	59	75	2	1	297
Allen, except	1	0	0	1	0	0	13	0	0	2	0	1	0	0	0
Iola	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Anderson	2	0	0	0	0	5	0	0	0	1	0	0	0	0	0
Atchison, except	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0
Atchison city	0	0	3	0	0	4	1	0	0	14	0	0	0	0	0
Barber	0	0	0	0	0	6	2	0	0	0	0	0	0	0	0
Barton, except	3	1	12	1	0	10	81	0	2	3	0	0	0	0	0
Great Bend	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bourbon, except	2	0	18	1	24	9	2	0	0	0	0	1	0	0	3
Fort Scott	1	0	25	10	0	0	2	0	0	3	0	1	0	0	5
Brown	1	0	1	2	2	4	1	0	0	1	0	2	0	0	0
Butler, except	12	0	22	1	1	5	50	0	0	37	6	3	0	0	3
Augusta	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
El Dorado	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chase	0	0	0	1	0	2	0	0	4	0	0	0	0	0	0
Chautauqua	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0
Cherokee, except	3	1	4	1	0	0	18	0	5	0	0	0	0	0	1
Galena	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cheyenne	0	0	6	0	0	13	3	0	0	0	0	0	0	0	0
Clark*	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Clay	3	0	7	1	0	4	38	0	0	0	0	0	0	0	0
Cloud, except	0	0	8	1	0	2	22	1	2	0	4	1	0	0	1
Concordia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coffey	0	0	0	1	0	1	4	0	0	0	0	0	0	0	1
Comanche*	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Cowley, except	39	0	0	0	0	9	70	0	3	10	1	1	1	0	6
Arkansas City	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Winfield	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crawford, except	0	0	10	2	0	0	9	0	0	2	0	1	0	0	1
Pittsburg	2	1	3	1	0	1	66	0	1	0	0	0	0	0	4
Decatur	0	0	24	0	0	3	1	0	2	1	0	1	0	0	0
Dickinson	15	0	4	0	0	4	0	0	1	6	0	0	0	0	1
Doniphan	1	0	13	2	0	5	12	0	1	4	0	1	0	0	1
Douglas, except	3	0	0	2	0	0	1	0	0	0	0	0	0	0	0
Lawrence	4	0	4	2	0	4	1	0	13	1	0	1	0	0	2
Edwards	0	1	0	1	0	3	6	1	0	0	0	0	0	0	0
Elk	0	0	0	0	4	4	4	0	0	0	2	1	0	0	0
Ellis	0	0	0	3	0	4	5	0	0	0	0	0	0	0	1
Ellsworth	1	0	7	0	0	0	12	0	6	0	0	4	0	0	3
Finney	3	0	6	0	0	2	4	0	17	3	1	1	0	0	2
Ford, except	16	0	1	0	0	2	15	0	0	2	1	0	0	0	0
Dodge City	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Franklin, except	9	0	12	0	0	1	3	0	0	0	0	0	0	0	0
Ottawa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Geary, except	3	0	0	43	0	6	7	0	7	32	0	0	0	0	0
Junction City	0	0	0	0	0	0	21	0	0	0	0	0	0	0	0
Gove	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Graham	0	0	0	0	0	2	25	0	0	0	4	0	0	0	0
Grant	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
Gray	0	0	0	0	0	2	0	0	2	3	1	1	0	0	0
Greeley*	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Greenwood	1	2	24	4	7	1	64	0	0	1	0	2	0	0	0
Hamilton	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0
Harper	2	0	5	0	1	4	13	0	24	5	4	3	0	0	1
Harvey, except	2	0	11	1	0	3	9	0	2	1	0	0	0	0	0
Newton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Haskell	0	0	1	0	0	0	0	0	4	0	0	0	0	0	0
Hodgeman	0	0	0	0	0	1	34	0	0	1	0	0	0	0	0
Jackson	3	0	0	0	0	1	1	0	0	0	0	0	0	0	0
Jefferson	0	0	1	3	0	0	0	0	0	1	0	1	0	0	3
Jewell	0	0	13	0	0	1	6	0	1	0	0	0	0	0	0
Johnson	1	0	0	1	0	6	1	0	0	2	0	1	0	0	0
Kearny	1	0	2	0	0	2	0	0	0	0	0	0	0	0	0
Kingman	0	0	0	0	0	0	17	1	2	6	0	0	0	0	0
Kiowa	2	0	0	1	0	14	36	0	0	0	0	0	0	0	0
Labette, except	4	0	6	1	0	1	0	0	0	0	0	0	0	0	2
Parsons	5	0	19	0	0	2	2	0	2	2	0	0	0	0	18
Lane	2	0	1	0	0	0	0	0	0	0	0	0	0	0	11
Leavenworth, except	0	0	1	2	0	0	2	0	0	0	0	1	0	0	0
Leavenworth city,	1	0	2	7	0	1	42	0	5	0	0	0	0	0	

MORBIDITY REPORT FOR APRIL, 1921—Concluded.

COUNTIES AND CITIES.	Tuberculosis	Typhoid and Paratyphoid	Smallpox	Diphtheria	Influenza	Scarlet Fever	Measles (morbilli)	German Measles (rubella)	Whooping Cough	Chickenpox	Mumps	Pneumonia (acute) (all forms)	Meningitis (epidemic)	Poliomyelitis (epidemic)	Other diseases (see Addenda)
Lincoln	0	0	8	0	0	1	12	0	5	0	0	1	0	0	1
Linn	1	0	1	1	0	0	3	0	0	0	0	0	0	0	1
Logan	0	0	1	0	0	4	1	0	0	0	0	0	0	0	0
Lyon, except	4	0	2	0	0	6	24	0	0	7	0	0	0	0	0
Emporia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Marion	26	0	13	0	0	10	34	0	0	4	0	0	0	0	3
Marshall	1	0	27	0	0	1	12	0	1	0	0	0	0	0	1
McPherson	8	0	0	2	0	2	11	0	0	0	0	0	0	0	0
Meade	0	0	8	1	0	0	4	0	0	2	0	1	0	0	0
Miami	1	1	4	0	0	0	0	0	0	5	1	0	0	0	0
Mitchell	1	0	13	0	0	4	52	0	0	2	1	0	0	0	1
Montgomery, except	11	2	7	8	0	0	36	0	0	2	2	0	0	0	6
Coffeyville	4	2	1	0	1	0	0	0	0	0	0	2	0	0	2
Independence	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Morris	2	0	3	0	0	2	20	0	0	0	0	0	0	0	0
Morton	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0
Nemaha*	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Neosho, except	11	1	2	4	0	1	13	0	1	5	4	2	0	0	4
Chanute	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ness	0	0	6	0	0	2	23	0	0	1	0	0	0	0	0
Norton	6	0	0	0	0	1	1	0	0	6	0	0	0	0	0
Osage	2	0	5	0	0	2	0	0	0	1	0	1	0	0	0
Osborne	0	0	1	0	0	0	7	0	1	15	1	0	0	0	0
Ottawa	0	1	1	0	0	2	207	0	0	0	0	0	0	0	0
Pawnee	0	0	5	0	0	10	87	0	1	0	14	3	0	0	0
Phillips	1	0	15	0	0	9	85	0	1	0	0	0	0	0	0
Pottawatomie	2	0	1	0	0	1	0	0	0	0	0	0	0	1	0
Pratt	1	0	2	0	0	5	44	0	2	5	0	0	0	0	0
Rawlins	0	0	6	0	1	1	2	0	0	0	0	1	0	0	0
Reno, except	4	0	26	0	0	4	8	0	4	1	0	1	0	0	1
Hutchinson	0	0	64	1	0	14	32	0	0	6	0	1	0	0	2
Republic	0	0	3	0	0	1	11	0	9	0	0	1	0	0	0
Rice	1	0	16	0	0	5	6	0	14	1	0	1	0	0	0
Riley, except	1	0	0	8	0	0	27	0	10	5	0	0	0	0	1
Manhattan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rooks	0	0	5	0	0	1	22	0	0	0	0	0	0	0	0
Rush	1	0	0	0	0	6	12	0	0	0	0	0	0	0	1
Russell	0	0	12	2	0	0	42	0	23	0	0	0	0	0	0
Saline, except	0	0	4	1	0	3	0	0	0	0	0	0	0	0	0
Salina	1	0	11	5	0	4	1	0	0	0	0	0	0	0	6
Scott	0	0	3	0	0	0	0	0	0	4	0	0	0	0	0
Sedgwick, except	1	0	0	2	0	1	22	0	0	0	0	0	1	0	0
Wichita	13	0	38	18	1	30	482	0	9	88	2	9	0	0	25
Seward	0	0	1	0	0	9	1	0	1	0	0	0	0	0	0
Shawnee, except	4	0	1	0	0	5	0	0	1	0	0	2	0	0	0
Topeka	28	1	35	5	1	22	11	0	3	120	0	1	0	0	42
Sheridan	1	0	1	0	0	1	2	0	3	0	0	0	0	0	0
Sherman	0	0	4	0	0	1	0	0	1	2	0	1	0	0	0
Smith	0	0	2	0	0	1	19	0	2	1	0	0	0	0	0
Stafford	2	0	23	0	0	3	5	0	0	1	0	0	0	0	1
Stanton	0	0	3	0	0	0	0	0	0	2	0	0	0	0	0
Stevens	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Sumner, except	20	0	3	1	3	7	322	0	11	4	0	4	0	0	4
Wellington	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Thomas*	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Trego*	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Wabaunsee	1	0	0	1	0	3	2	0	0	3	0	0	0	0	0
Wallace*	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Washington	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Wichita	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wilson	2	0	14	3	0	0	9	0	0	3	2	1	0	0	0
Woodson	1	0	1	0	0	0	0	0	0	1	0	0	0	0	0
Wyandotte, except,	1	0	1	4	0	0	1	0	1	2	0	1	0	0	0
Kansas City	26	0	65	18	0	2	74	0	11	107	8	12	0	0	34
Rosedale	0	0	0	0	0	0	0	0	0	0	0	0	0	0	89

* No report.

Other communicable diseases: Cancer, 14; chancroid, 2; encephalitis lethargica, 1; erysipelas, 11; gonorrhœa, 118; pellagra, 1; syphilis, 149; trachoma, 1.

A General Outline of a Comprehensive Plan of Rural Health Work.

By Dr. A. J. Warren, International Health Board.

The conceptions held by our ancestors regarding public health, and still held by many people to-day, are rapidly undergoing revolution. Before the facts regarding the contagious diseases were known, many thought that they were inevitable and that the only thing to do was to try and get well after you became sick. Not knowing the causes of diseases, their source of origin was sought in the surroundings of man, such as the air, water, climate, and the accumulation of trash and refuse. Tuberculosis was considered hereditary and noninfectious. The contagious diseases were thought to originate in the slums and in the homes of the poor; and when they invaded the home of the well-to-do, a leak in the plumbing probably accounted for diphtheria, rotten potatoes in the basement for typhoid, and malaria was thought to be due to dampness or exposure to the night air.

As the result of scientific investigations, great changes are taking place. We now know that the infectious diseases are caused by specific organisms and that their source is not in man's surroundings, but in man himself. The old public health was concerned with the environment; the new with the individual. But the public has not been properly educated regarding the new public health and the principles of disease prevention. The individual does not appreciate the responsible relation that exists between the individual and the community.

The public-health problem, then, is to properly educate the people relative to disease prevention and health conservation; and this information must be disseminated in such a manner as to cause the individual and the home to apply the principles of hygiene and sanitation and receive benefits therefrom. The health departments of the various states are conducting their work from this viewpoint and excellent results are being accomplished; but the problem is a personal and individual one, and it is manifestly impossible for the state department to create and maintain a personal contact with the two or more millions of people under its jurisdiction. This fact is recognized in our civil government, and as adjuncts to the state machinery we have the counties. The logical way for the state department to expand, therefore, is not to create new districts or subdivisions in the state, but to use the ones that are already in existence and are recognized governmental divisions. The responsibility for such expansion does not rest entirely upon the state department, however; it is mutual. The county should provide public-health machinery, while the state should subsidize and coördinate the work of the different counties in such a manner as to increase the county initiative and to insure the maximum amount of efficiency on behalf of the county machinery.

Kansas should be particularly interested in rural sanitation, because approximately two-thirds of her total population live in the rural districts. Everything that is vital to the state is dependent upon this rural population. And this population, effectively to pursue their vocation, are dependent absolutely upon healthy, robust bodies that are not crippled by devitalizing diseases. If the average for the country at large is applicable to the state of Kansas we can visualize the problem by taking a composite average group of seventy-one. Of this number, one will die during the year; two will be in the bed continuously; thirty will have an impairment of health, ranging all the way from the person who is just able to be out of bed to the one who is not quite up to normal; twenty-five will represent a group that we call healthy; while there will be thirteen members who are vigorous, who have the feeling of exhilaration, who pursue their tasks with enthusiasm, whose lives are dynamic with inspiration of lofty views and high ideals. Another application in the terms of total population would mean that there are approximately 20,000 deaths annually in Kansas; there are 4,000 persons sick in bed every day in the year; or, in other words, there is lost to the state of Kansas annually 1,460,000 days, or 4,000 years, on account of sickness, much of which is preventable. And in addition to this there are 60,000 who are constantly in a state of impaired health. The financial equivalent of this economic loss would be practically inestimable.

To effectively cope with the conditions we must direct our energies into those channels that lead most directly towards the greatest number of individuals. The most effective weapon of combat has been suggested —public-health education. The most direct and effective channel through which this weapon can be wielded is the county health organization, the personnel of which is in direct contact with the people.

The minimum requirements for a county health organization should be, first of all, a health officer who is a registered physician, bearing the approval of both the state and county boards of health. By preference he should have either public-health training or experience; second, a clerical assistant who is capable of doing stenographic work and keeping neat and accurate files. One or more public-health nurses of such qualifications as will meet the requirements of the state. A sanitary inspector, who may be a layman without training or experience.

Having secured the personnel, the question naturally arises, What shall their duties be? To have an organization without a program would be equal to having a program and no organization to execute it. Each is vital to the other, and unless you have the two you have no use for the one. Some counties may have problems that are peculiar to their particular locality, but there are certain public-health problems that are common to all, and these I will suggest in a general outline. The first and prime duty of the county organization is to properly educate the population from a public-health viewpoint. As a public-health official has expressed it, "The truth is that educational work is never a closed chapter. Nor is it enough to inform a man once on a subject. He must be informed over and over again and in every conceivable manner before he is really educated with respect to any given point. Knowledge and education are by no means synonymous terms. Education is that portion of knowledge which finds its way into the organic structure of the subconscious ego, thereby giving rise to characteristic reactions on the part of the ego." To effectively conduct this work, free use should be made of carefully considered lectures, illustrated with lantern slides, and to furnish, with the aid of the State Board of Health and other public-health agencies, such educational material, in the forms of pamphlets, folders and bulletins, to the people of the county as will prove of value in emphasizing the importance of health conservation. Free use should also be made of the press of the county for the publication of suitable news items and educational material relating to the work of the county health department. At county and community fairs and public schools, and at such other places as may be practicable, suitable public-health exhibits should be displayed, and use should be made of all other organizations and propaganda for informing the people as to the importance of public-health protection.

The second problem that is applicable to every county is the quarantine unit, which should be conducted in accordance with the laws of the state. In the discharge of this duty the health officer should consult with the attending physicians in regard to contagious diseases, and visit communities, schools and homes and conduct epidemiological investigations and establish the necessary measures of control.

The county department should endeavor to meet the people of the county in publicly announced and well-advertised dispensaries for the purpose of administering vaccines of established value.

The problem of soil pollution from improperly constructed latrines should be vigorously attacked. In so far as practicable, every home in the county should be visited by a representative of the department and instructed as to the best method of safeguarding the water supplies, screening the homes, elimination of fly-breeding places and the proper construction of a safe latrine.

The medical inspection of all school children in the county should be conducted annually, if possible, by the county organization; the real objective being, however, not the examination but the correction of as many defectives as possible.

Another problem that is universal and should require the active attention of the county department is that of tuberculosis. The general measures of control here should be the carefully recording of the reported cases of tuberculosis and of deaths from the disease; visiting the homes of persons afflicted with tuberculosis as often as is necessary, so as to enable them to utilize the best means of treatment and those sanitary measures necessary for the prevention of the spread of the disease to others; the investigation of the general health of the members of families where tuberculosis exists, or has existed within three years preceding, and the arrangement for clinics for the examination of persons with suspicious evidences of the disease.

The question of a high infant death rate has been for 100 years a subject of general comment, but not until recent years have measures of control been suggested or undertaken. This is a problem of serious magnitude and it should receive no little portion of the county organization's attention. The county department should organize and instruct, by lectures and demonstrations, mothers' clubs and other groups of people in the essentials of home sanitation, prenatal and postnatal care, and especially in the feeding of infants; they should visit every home where there are bottle-fed children and children suffering from digestive disturbances or diarrheal diseases. Provisions should be made at the county office and at other appointed places for conferences with expectant mothers.

The seven definite pieces of work suggested in the above outline could easily consume the entire time of an efficient and well-organized county health department, and there will be other work to do. This outline, however, is taken from a plan that has been carefully worked out and has been found to be of practical application, provided the work is carefully arranged before any particular piece is attempted. These very general ideas have been submitted to you with the hope that you who are interested in the betterment of the social conditions of your respective communities will, when you return to your native counties, take cognizance of the kind of health protection that is being furnished the people of your county and of the amount of money that is being spent for the protection of the public health, and if the protection being furnished is not what it should be, then demand of your county officials and state representatives in the legislature that they provide for the human's protection equal at least to that provided for the live stock. "Thou shalt not kill" with a gun or other deadly weapon, but the known typhoid carrier can depopulate his community without hindrance or censure. It is clearly the duty of the governmental agencies to provide public-health protection for their constituents. "In order to make facts pertaining to health contribute most largely to human happiness two things are necessary: first, to establish such facts and to correlate them, so that we may understand their full significance and the underlying principles; second, to weave these facts into the lives of the people."

Postgraduate Course in Medicine

Offered in the University of Kansas Medical School at Rosedale from June 13 to July 23, 1921.

s 61.—CLINICAL AND GENERAL PATHOLOGY.............*Dr. H. R. Wahl.*

Open to physicians only.

This is a practical laboratory course designed to meet the needs of the general practitioner and others who desire acquaintance with modern methods of laboratory diagnosis, who seek information on the significance, value and interpretation of these laboratory procedures, and who desire to know how far they can be adapted to their own office practice. The course consists of demonstrations, laboratory work, conferences, and explanatory lectures.

The following are some of the subjects to be discussed:

Practical points in urine analysis.
Examination of feces.

Gastric analysis.
Examination of spinal fluids.
Examination of sputum and urine for tubercle bacilli.
Examination of urethral, vaginal and pharyngeal smears.
Determination of types of pneumococci.
Blood sugar in diabetes.
Basal metabolism.
Kidney function tests.
Value of blood chemistry in diagnosis and prognosis.
Autopsy technic.
Technic of rapid tissue diagnosis with the use of the freezing microtome.
Schick test.
Transfusion and grouping of bloods.
Interpretation of the Wassermann reaction.
Blood examinations. Differential counting.
Anæmias; leukæmias.
Vaccine and serum therapy.
Demonstration of the value of correlating the clinical picture with the postmortem findings.

The course will occupy two hours each morning five days in the week, for six weeks, beginning June 13. It will be so arranged that a physician may enter any week and leave at any time. University credit of 1 to 6 hours will be given, according to the time put in and the work done.

While the course requires two hours' work a day, additional time may be put in the laboratory, the pathological museum, and slide collections being accessible to those enrolled in the class. In this way tumors of many types may be studied.

In addition one or more clinics will be held daily in the Bell Memorial Hospital by Doctors Curran, Sudler, Bohan, Murphy, Orr, Ockerblad and other members of the hospital staff and dispensary. The dispensary, where an average of sixty to seventy patients are treated daily, will be available for those who desire to see more clinical material.

The fee will be the usual summer-session fee of the University, which is $10, and an additional laboratory and microscope fee of $8.

Inquiries should be made to the dean of the Medical School.

The course is limited to twenty.

The Inspired Adolescent.

(Letter received by a Kansas colleague.)

Dear Grandpa:—I am sick abed, but all my sickness is in my head. They've taken my tonsils and adenoids, too; how would you like that done to you? I can't talk and I can't sing, and I can't swallow anything; this kind of life will get my goat for my stomach thinks they've cut my throat. But just as sure as I have toes, I breathe now straight up through my nose. With lots of love and kisses, too, I hope such a thing won't happen to you. Your granddaughter. T. B.

Report of Public Health Laboratory for March, 1921.

TOPEKA, KAN., May 2, 1921.

MEMORANDUM.

To: Secretary State Board of Health.
From: Public Health Laboratory.
Subject: Report of work done by Laboratory for the month of April, 1921.

	April.		*March.*	
1. Complement fixation test for syphilis—				
Blood specimens from physicians:				
Positive	78		124	
Negative	226		346	
Doubtful	32		45	
Unsatisfactory specimens	4		20	
Totals		340		535
Blood specimens from Lansing:				
Positive	30		34	
Negative	81		25	
Doubtful	17		13	
Unsatisfactory specimens	1		8	
Totals		129		80
Spinal fluid:				
Positive	3		1	
Negative	8		12	
Doubtful	3		...	
Totals		14		13
2. Examination of sputum for tuberculosis:				
Positive	22		37	
Negative	140		147	
Unsatisfactory specimens	1		1	
Totals		163		185
3. Examination of cultures for diphtheria:				
Positive	20		25	
Negative	101		168	
No growth	16		17	
Unsatisfactory	2		1	
Totals		139		211
4. Examination of smears for gonococcus:				
From physicians:				
Positive	11		10	
Negative	34		40	
Unsatisfactory	2		5	
Totals		47		55
From Lansing:				
Positive	3		2	
Negative	132		84	
Unsatisfactory	...		1	
Totals		135		87
5. Examination of Widals for typhoid fever:				
Positive	4		7	
Negative	13		11	
Unsatisfactory	4		2	
Totals		21		20
6. Miscellaneous examinations:				
Blood slide for pernicious anemia	1		...	
Dark field	2		...	
Swab from ulcer	1		...	
Animal heads for rabies	3		...	
Stool specimen for anchylostomta, doudenal	1		...	
Spinal fluid for meningococcus	3		...	
Smear for actinomycosis	1		...	
Smear for malaria	1		...	
Smear for Vincent's angina	1		...	
Stool specimen	1		...	
Totals		15		19
Grand totals		1,003		1,206

Report of Division of Water and Sewage.

MARCH, 1921.

ALBERT H. JEWELL, Chief.

Permits Issued or Refused for Waterworks and Sewerage.

Date.	*Place.*	*Nature of improvement.*
Mar. 7	Neodesha	Sewer extensions.
Mar. 18	Burrton	Water extensions.
Mar. 18	Topeka	Water-purification plant.
Mar. 31	Dodge City	Sanitary sewer extensions.

Final Inspections on Completed Work.

Date.	*Place.*	*Nature of improvement.*
Mar. 22	Canton	Municipal waterworks.
Mar. 23	Belle Plaine	Sewer system (second inspection).
Mar. 24	Burns	Municipal waterworks.
Mar. 26	Minneola	City water plant.

Inspections Made.

Date.	*Place.*	*Nature of improvement.*
Mar. 8	Pleasanton	Waterworks with kit.
Mar. 9	Mound City	City waterworks.
Mar. 11	Fort Scott	City waterworks.
Mar. 12	La Cygne	City waterworks.
Mar. 11	Fort Scott	Frisco Railway.
Mar. 14–18	Olathe	Waterworks with kit.
Mar. 14	Ottawa	Springs.
Mar. 15–16	Osawatomie	City water supply.
Mar. 18	Burlingame	Investigating condition of filter plant and sewage disposal.
Mar. 21	Herington	City waterworks.
Mar. 21	Herington	Sewage disposal.
Mar. 25	McFarland	C. R. I. & P., private supply.
Mar. 25	Pratt	Railway water.
Mar. 31	Greenleaf	New well location.
Mar. 31	Howard	Sewage disposal.

Plans or preliminary reports have been received or conferences have been held with municipal authorities for new work at the following places:

Anthony	Additional water supply.
Emporia	Water improvements.
Garden City	Additional water supply.
McPherson	Sewer extensions.
Manhattan	Water-softening plant.
Osawatomie	Extensions to sewer system.
Oswego	Sewage disposal.
Ottawa	Water-purification plant.
White Water	New water supply.
La Crosse	Additional water supply.

Record of analyses made in Water and Sewage Laboratory at Lawrence during January, 1921:

Source of Supply.	*Bact.*	*Chem.*	*Miscel.*
City supplies	474	43	..
Bottled waters	7	..	..
Private supplies	42	4	..
Railroad supplies	7	..	..
Ice	18	..	..
Miscellaneous	..	7	..
Ice supply	2	..	..
Sand	..	..	2
Totals	550	54	2—606

Licenses Issued.

Date.	*Place.*	*Person or firm and purpose.*
Mar. 30	Atwood	Piedalue & McGonele. Manufactured ice.
Mar. 25	Caldwell	Caldwell Crystal Ice & C. S. Co. Manufactured ice.
Mar. 5	Cottonwood Falls	W. W. Austin Ice Co. Manufactured ice.
Mar. 5	Emporia	Emporia Ice and C. S. Co. Manufactured ice.
Mar. 5	Fort Scott	Fort Scott Ice Manufacturing Co. Manufactured ice.
Mar. 5	Fort Scott	O'Connor & Hamlin. Manufactured ice.
Mar. 30	Fredonia	Fredonia Light & Ice Co. Manufactured ice.
Mar. 25	Hutchinson	McArthur Packing Co. Manufactured ice.
Mar. 25	Liberal	Liberal Light, Ice & Power Co. Manufactured ice.
Mar. 25	Moline	Moline Creamery. Manufactured ice.
Mar. 30	Neodesha	Neodesha Crystal Ice Co. Manufactured Ice.
Mar. 5	Newton	Newton Ice Co. Manufactured Ice.
Mar. 30	Norton	Norton Ice Co. Manufactured Ice.
Mar. 25	Osage	Farmers' Coöp. Creamery & Ice Co. Manufactured ice.
Mar. 30	Wellsville	C. A. Smith Electric Co. Manufactured Ice.
Mar. 5	Kirwin	Clarence Mason. Natural ice.
Mar. 25	Long Island	Al Skelton. Natural ice.
Mar. 30	Morland	Kobler Drug Co. Natural ice.
Mar. 9	Garden City	Santa Fe. Private supply.

Report of Division of Water and Sewage.

APRIL, 1921.

ALBERT H. JEWELL, Chief.

Permits Issued or Refused for Waterworks and Sewerage.

Date.	*Place.*	*Nature of improvement.*
Apr. 5	Miltonvale	Water extensions.

Final Inspections on Completed Work.

Apr. 2	Portis	City water supply.

Inspections Made.

Apr. 1	Moline	City waterworks.
Apr. 1	Moline	Santa Fe, private supply.
Apr. 1	Phillipsburg	Liquid chlorine equipment at city wells.
Apr. 2	Eureka	City waterworks.
Apr. 2	Portis	City water supply.
Apr. 2	Portis	Special investigation of water pollution.
Apr. 5–9	Kansas City	Waterworks.
Apr. 8	Leavenworth	Waterworks.
Apr. 8	Leavenworth	Santa Fe.
Apr. 14	Horton	City water supply.
Apr. 14	Horton	Rock Island, private supply.
Apr. 18	Atchison	Water-treatment plant.
Apr. 26–27	Erie	New filter plant.
Apr. 26–27	Erie	Sewage-disposal plant.
Apr. 28	Oswego	City water supply.
Apr. 28	Oswego	Sewage disposal.
Apr. 30	Moran	City water supply.

Plans for preliminary reports have been received or conferences have been held with municipal authorities for new work at the following places:

Anthony	Additional water supply.
Atwood	Sewerage and sewage disposal.
Emporia	Water improvements.
Emporia	Sewage disposal.
Garden City	Additional water supply.
Manhattan	Water-softening plant.
Kansas City	Garbage disposal.
Oswego	Sewage disposal.
Ottawa	Water-purification plant.
La Crosse	Additional water supply.
Peabody	Extensions to water system.
Salina	Sewage disposal.
White Water	New water supply.

Record of analyses made in Water and Sewage Laboratory at Lawrence, during April, 1921:

	Bact.	*Chem.*	*Miscel.*
City supply	493	43	..
Bottles waters	3	..	..
Private supplies	39	1	..
Railroad supplies	1	..	..
Miscellaneous	4	..	..
Ice	34	..	..
Algæ	...	..	2
Sand	...	..	6
	574	44	8—626

Licenses Issued.

Date.	*Place.*	*Person or firm and purpose.*
Apr. 15	Arkansas City	Kansas Southwestern. City supply.
Apr. 15	Arkansas City	Missouri Pacific. City supply.
Apr. 15	Arkansas City	Santa Fe. City supply.
Apr. 15	Bucklin	Rock Island. City supply.
Apr. 15	Chanute	Santa Fe. City supply.
Apr. 15	Cherryvale	Frisco. City supply.
Apr. 15	Cherryvale	Santa Fe. City supply.
Apr. 15	Coffeyville	Missouri Pacific. City supply.
Apr. 15	Coffeyville	Santa Fe. City supply.
Apr. 15	Conway Springs	Missouri Pacific. City supply.
Apr. 15	Council Grove	Missouri Pacific. City supply.
Apr. 15	Emporia	Santa Fe. City supply.
Apr. 15	Fort Scott	Frisco. City supply.
Apr. 15	Fort Scott	Missouri Pacific. City supply.
Apr. 15	Harper	Santa Fe. City supply.
Apr. 15	Hutchinson	Arkansas Valley Interurban. City supply.
Apr. 15	Hutchinson	Santa Fe. City supply.
Apr. 15	Kansas City	Kansas City, Kaw Valley & Western. City supply.
Apr. 15	Kansas City	Kansas City Terminal. City supply.
Apr. 15	Kansas City	Santa Fe. City supply.
Apr. 15	Kansas City	Union Pacific. City supply.
Apr. 15	Leavenworth	Burlington. City supply.
Apr. 15	Leavenworth	Missouri Pacific. City supply.
Apr. 15	Leavenworth	Rock Island. City supply.
Apr. 15	Leavenworth	Santa Fe. City supply.
Apr. 15	Leavenworth	Union Pacific. City supply.
Apr. 2	McFarland	Rock Island. Private supply.
Apr. 15	Marysville	Grand Island. City supply.
Apr. 15	Marysville	Union Pacific. City supply.
Apr. 15	Moline	Santa Fe. Private supply.
Apr. 15	Moran	M. K. & T. City supply.
Apr. 15	Neodesha	Frisco. City supply.
Apr. 15	Osage City	Santa Fe. City supply.
Apr. 2	Osawatomie	Missouri Pacific. City supply.
Apr. 15	Parsons	M. K. & T. City supply.
Apr. 15	Phillipsburg	Rock Island. City supply.
Apr. 2	Pratt	Rock Island. City supply.
Apr. 2	Pratt	Santa Fe. City supply.
Apr. 15	Seneca	Grand Island. City supply.
Apr. 15	Seneca	Kansas City Northwestern. City supply.
Apr. 15	Topeka	Missouri Pacific. City supply.
Apr. 15	Topeka	Rock Island. City supply.
Apr. 15	Topeka	Santa Fe. City supply.
Apr. 15	Topeka	Union Pacific. City supply.
Apr. 11	Ottawa	J. H. Crawford. Bottled water.
Apr. 22	Atchison	Crystal Ice Co. Manufactured ice.
Apr. 16	Buhler	Farmers' Ice & Prod. Co. Manufactured ice.
Apr. 22	Chapman	Mercantile Ice Co. Manufactured ice.
Apr. 22	Council Grove	Morris County Light & P. Co. Manufactured ice.
Apr. 16	Downs	Artificial Ice & St. Co. Manufactured ice.
Apr. 22	Elkhart	Elkhart Ice Co. Manufactured ice.
Apr. 16	Ellsworth	Weber Elec. Power Co. Manufactured ice.
Apr. 22	Frontenac	Menghini Bros. Manufactured ice.
Apr. 16	Gaylord	Community Ice & Amuse. Co. Manufactured ice.
Apr. 16	Glen Elder	Glitzke & Co. Manufactured ice.
Apr. 16	Great Bend	Great Bend Ice & Fuel Co. Manufactured ice.
Apr. 16	Hiawatha	Hiawatha Light, Power & Ice Co. Manufactured ice.
Apr. 16	Kiowa	Kiowa Ice & Storage Co. Manufactured ice.
Apr. 22	Mt. Hope	J. H. Berger. Manufactured ice.
Apr. 22	Olathe	City Ice Co. Manufactured ice.
Apr. 22	Ottawa	B. D. Bennett. Manufactured ice.

Date.	*Place.*	*Person or firm and purpose.*
Apr. 22	Peabody	Peabody Light, Power & Ice Co. Manufactured ice.
Apr. 16	Pratt	Pratt Ice & Coal Co. Manufactured ice.
Apr. 22	Randolph	City Meat Market. Natural ice.
Apr. 22	Sedan	Sedan Crystal Ice Co. Manufactured ice.
Apr. 16	Wichita	Steffen-Bretch Ice & I. C. Co. Manufactured ice.
Apr. 16	Wichita	Wichita Ice & C. S. Co. Manufactured ice.

How to Work.

After reading the very interesting article in this issue of the BULLETIN by Dr. A. J. Warren, of the International Health Board, the citizens of Kansas will be anxious to know how they may accomplish the public health organization that is recommended in Doctor Warren's article. The best way to do this is by organizing a public health association for your own county or town. The Kansas Public Health Association encourages the organization of subsidiary associations throughout the state and is very glad to give advice and help to those who are interested in setting them on foot. The following communities in Kansas are organized for public health work and helping to put on an active program:

Wyandotte County Public Health Association.
Marion County Public Health Association.
Ford County Public Health Association.
Atchison County Public Health Association.
Topeka Tuberculosis Association.
Winfield Public Health Association.
Arkansas City Tuberculosis Association.
Douglas County Tuberculosis Association.
Pratt County Public Health Association.
Sumner County Tuberculosis Association.
Labette County Tuberculosis Committee.
Allen County Tuberculosis Committee.
Neosho County Tuberculosis Committee.
Montgomery County Tuberculosis Committee.
McPherson County Tuberculosis Committee.

Public Health Personal.

Dr. C. S. Kenney, of Norton, superintendent of the State Tuberculosis Sanitorium, was elected president of the Kansas Medical Society at its last annual meeting. We extend congratulations to Doctor Kenney on his election, and to the state society on the wisdom of its choice. Doctor Kenney is a big man in every way. It has been said of him that his intelligence is in direct ratio with his circumference, and this is saying much, but we go so far as to say that the broadest thing about Doctor Kenney is his vision of public health. We feel that Doctor Kenney's election to the office of president will give the Kansas Medical Society a public health stimulus such as it has never before realized and we look forward with great interest to its program. The following high tribute is from the May issue of the *Journal* of the Kansas Medical Society:

"To say that a wise selection was made in the choice of Doctor Kenney for president is only to repeat a sentiment frequently expressed by those at the last meeting. Doctor Kenney has a pleasing personality, is widely and favorably known over the state, has been an active and faithful member of the council and has shown unusual ability as an organizer in his own district. His position as superintendent of the State Hospital for Tuberculosis affords him many opportunities to visit various parts of the state. Perhaps no one in the society could so nearly meet our present requirements as Doctor Kenney."

Marriages.

Dr. Jacob J. Entz to Mrs. Virginia Knox Kimble, May 5.—A ceremony that strikes our sense of the fitness of things as particularly appropriate was the marriage, on May 5, of Mrs. Virginia Knox Kimble, formerly state supervisor of public health nursing, to Dr. Jacob J. Entz, of Marion. Doctor Entz is a member of the State Board of Health, county health officer of Marion county, and a pioneer in rural health work. Mrs. Entz has stood for many years in the front rank of the Kansas women who do things. Her keen wit, cleverness of address and charming personality have made her a great favorite as a public speaker. Her interest in public health matters is born of first-hand knowledge of its great needs and opportunities. We extend to the happy couple our felicitations on their union of strength and character. Doctor and Mrs. Entz will be at home to their friends at 228 Fountain avenue, Wichita, Kan.

A Kansas Physician Author.

While we do not think it seemly for the State Board of Health to spend much of its precious BULLETIN space on the doings of its own personnel, it is perhaps excusable to reprint what a famous medical magazine says about one of us. In its issue of April 20, under the caption of "Physician Authors," the *New York Medical Journal* gives a full-page editorial to Dr. Charles H. Lerrigo, state registrar, a portion of which is herewith quoted:

"Although he is registrar of vital statistics for the state of Kansas, executive secretary of the Kansas Public Health Association, and executive secretary of the Kansas State Tuberculosis Association, Dr. Charles Henry Lerrigo, of Topeka, occasionally finds odd moments—generally of an evening—to devote to writing. Some of this writing is strictly medical, and appears from time to time in the medical press. Some of it consists of articles on popular medicine, for the laity.

"Lerrigo's fiction for grownups has a decided medical flavor. There are two volumes—'Doc Williams,' published in 1913, and 'The Castle of Cheer,' which appeared three years later. Old Doc Williams, a well-meaning, shrewd old man, honest in his quackery but a quack nevertheless, figures in both volumes, as do several other characters. Doc Williams's adopted son David is educated to be a 'real doctor, equal to the best.' The story in the first volume centers on the tragedy of the young man torn between loyalty to the old quack and his own better judgment and honesty. In the end the old doctor abandons his 'marvelous healing oil' with which he has really accomplished a great deal of good. There is, of course, a girl in the story, so that it is spiced with romance. But the chief figure of interest is old Doc Williams, an optimist and homely philosopher who is much the same type as David Harum.

"Both of Doctor Lerrigo's novels have had a large sale in this country and England. There was even an order for a thousand copies of 'Doc Williams' from Australia. The book is to be reprinted this year in a popular-priced edition. Members of the medical profession have been particularly enthusiastic about Doctor Lerrigo's books. Speaking of 'The Castle of Cheer,' Dr. E. R. Baldwin, president of the National Association for the Study and Prevention of Tuberculosis, says: 'It is a book of real cheer, of sympathetic, genuine knowledge of actual life in good sanatoria; also an actual portrayal of the methods used by charlatans. Honest physicians will receive great encouragement and their patients valuable instruction from this tender story, containing as well a strong picture of the dire results of quackery. The author exhibits an understanding of the tuberculosis problem, refreshing to those who know it, to whom it will be no surprise that the book is dedicated to the late apostle of hope, Dr. E. L. Trudeau. It will be a new inspiration toward a humane attitude as to the danger of infection. Every doctor should read it and recommend it to his patients, whether directly affected or not."

Tuberculosis claims workers—active men and women in the homes, the office and shop.

Tuberculosis causes 150,000 deaths in the United States every year.

Tuberculosis costs the United States in dollars and cents about $500,000,000 annually.

More than 1,000,000 persons in this country are suffering from active tuberculosis right now.

Most of this waste could be prevented.

Tuberculosis menaces every community, every home and every individual.

And yet tuberculosis is curable and preventable.

Tuberculosis is spread largely by ignorance, carelessness and neglect.

The National Tuberculosis Association and its 1,200 affiliated state and local organizations wage a continuous winning war on tuberculosis.

The work of these organizations is financed chiefly by the sale of tuberculosis Christmas seals.

A flivver in Newton, Kan., broke the arms of four persons who attempted to crank it in less than a week. That's what comes of crossing a bicycle with a mule.—*The Legionaire.*

A PRAYER.

These are the gifts I ask of thee, Spirit serene—
    Strength for the daily task;
    Courage to face the road;
    Good cheer to help me bear the traveler's load;
And for the hours of rest that come between,
An inward joy in all things heard and seen.
These are the sins I fain would have thee take away—
    Malice and cold disdain;
    Hot anger, sullen hate;
    Scorn of the lowly, envy of the great;
And discontent that casts a shadow gray
On all the brightness of a common day.

—Henry Van Dyke.

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S. J. CRUMBINE, M. D., Editor.

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WHY WORRY?

"Always tell the truth, but don't be always telling it."

"To-day is the to-morrow you worried about yesterday."

When you take your vacation leave work and worry behind.

Worry poisons the body, distorts the mental horizon and embitters the spirit.

Moderate muscular exercise in the open air to the extent of slight fatigue, or until there is perceptible perspiration, is a greater preventive of disease than the whole apothecary shop.

SWAT THE FLY!

Oh, every fly that skips our swatters
Will have five million sons and daughters
And countless first and second cousins;
Of aunts and uncles, scores and dozens.
And fifty-seven billion nieces;
So knock the blamed thing all to pieces.
—*Walt Mason.*

MORBIDITY REPORT FOR MAY, 1921.

COUNTIES AND CITIES.	Tuberculosis	Typhoid and Paratyphoid	Smallpox	Diphtheria	Influenza	Scarlet Fever	Measles (morbilli)	German Measles (rubella)	Whooping Cough	Chickenpox	Mumps	Pneumonia (all forms)	Meningitis (epidemic)	Poliomyelitis (epidemic)	Other diseases (see Addenda)
THE STATE	189	33	786	142	10	305	1472	14	256	552	82	42	2	2	461
Allen, except	12	0	0	1	0	1	17	0	0	0	0	1	0	0	1
Iola	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Anderson	0	0	1	0	0	8	0	0	0	0	0	0	0	0	0
Atchison, except	0	0	0	0	0	0	16	0	0	0	0	0	0	0	1
Atchison city	3	0	1	1	0	1	0	0	0	4	0	0	0	0	0
Barber*	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Barton, except	0	0	23	0	0	3	97	0	8	4	0	1	0	0	3
Great Bend	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bourbon, except	0	0	5	0	0	1	0	0	0	0	0	0	0	0	0
Fort Scott	0	0	33	15	0	0	2	0	1	1	0	0	0	0	5
Brown	1	0	3	4	0	1	0	0	0	1	2	0	0	0	0
Butler, except	3	3	26	11	0	23	76	1	3	38	19	4	0	0	1
Augusta	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
El Dorado	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chase	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Chautauqua*	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cherokee, except	7	1	0	0	0	0	28	0	3	1	0	1	0	0	0
Galena	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cheyenne	0	0	8	1	0	2	0	0	0	0	2	0	0	0	1
Clark	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Clay	0	0	18	0	0	2	5	0	0	8	0	0	0	0	4
Cloud, except	1	1	7	0	0	6	7	0	0	0	1	0	0	0	2
Concordia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coffey	1	0	7	0	0	2	5	0	0	0	0	0	0	0	1
Comanche	0	0	0	0	0	0	49	0	0	0	0	0	0	1	0
Cowley, except	17	1	2	5	0	16	51	0	0	10	0	1	0	0	12
Arkansas City	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Winfield	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crawford, except	2	0	24	0	0	2	5	0	0	3	0	1	0	0	0
Pittsburg	0	0	9	1	0	1	35	0	0	0	0	0	0	0	5
Decatur	0	0	77	0	0	18	1	0	0	0	0	0	0	0	1
Dickinson	0	0	3	0	0	3	0	0	0	0	0	0	0	0	0
Doniphan	0	0	4	0	0	0	8	1	1	0	0	0	0	0	1
Douglas, except	4	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Lawrence	6	1	1	0	0	1	5	0	0	0	0	0	0	0	1
Edwards	0	0	0	0	0	2	6	0	0	0	0	0	0	0	0
Elk	0	0	0	0	0	2	8	0	1	0	0	0	0	0	1
Ellis	1	0	0	2	0	0	16	0	0	0	1	1	0	0	2
Ellsworth	0	0	14	0	0	0	16	0	17	0	1	1	0	0	1
Finney	0	0	10	0	0	0	3	0	3	2	0	0	0	0	1
Ford, except	5	0	0	0	0	4	8	1	8	1	5	0	0	0	1
Dodge City	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Franklin, except	1	0	7	0	0	2	0	0	0	0	0	0	0	0	0
Ottawa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Geary, except	0	1	1	6	0	3	35	0	43	17	0	1	0	0	5
Junction City	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gove	0	0	0	0	0	0	0	0	0	6	0	0	0	0	1
Graham	0	0	0	0	0	0	28	0	0	0	3	0	0	0	0
Grant	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Gray	1	0	0	0	0	2	3	0	1	0	2	1	0	0	0
Greeley*	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Greenwood	0	1	40	0	0	3	11	0	2	2	0	0	0	0	0
Hamilton	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0
Harper	0	1	2	0	0	2	0	0	3	1	3	1	0	0	0
Harvey, except	3	0	3	0	0	2	2	0	1	0	0	0	1	0	0
Newton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Haskell	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hodgeman	0	0	0	0	0	1	7	0	0	0	0	0	0	0	0
Jackson	0	0	3	1	0	1	2	0	0	0	0	0	0	0	0
Jefferson	0	0	3	0	0	1	0	0	10	0	0	0	0	0	0
Jewell	0	1	8	1	1	2	1	0	0	0	3	0	0	0	0
Johnson	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0
Kearny	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Kingman	0	0	4	0	0	0	16	0	0	2	0	0	0	0	0
Kiowa	0	0	1	0	0	4	9	0	0	0	0	0	0	0	0
Labette, except	1	0	26	4	0	0	0	0	6	0	0	0	0	0	18
Parsons	3	4	19	5	0	1	3	0	5	1	0	0	1	0	11
Lane	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Leavenworth, except	2	0	2	0	1	6	2	0	0	0	0	0	0	0	0
Leavenworth city,	1	0	0	3	0	1	30	0	2	2	0	0	0	0	9

MORBIDITY REPORT FOR MAY, 1921—Concluded.

COUNTIES AND CITIES.	Tuberculosis	Typhoid and Paratyphoid	Smallpox	Diphtheria	Influenza	Scarlet Fever	Measles (morbilli)	German Measles (rubella)	Whooping Cough	Chickenpox	Mumps	Pneumonia (all forms)	Meningitis (epidemic)	Poliomyelitis (epidemic)	**Other diseases (see Addenda)**
Lincoln	0	0	33	0	0	2	0	0	1	0	0	1	0	0	1
Linn	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
Logan	0	0	2	0	0	1	1	0	0	0	0	0	0	0	0
Lyon, except	3	0	0	0	0	8	5	0	0	8	0	2	0	0	1
Emporia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Marion	6	0	11	1	0	7	24	0	1	1	1	0	0	0	2
Marshall	0	0	5	0	0	6	8	0	0	1	0	0	0	0	1
McPherson	1	1	3	0	0	0	2	0	21	0	0	0	0	0	0
Meade	0	0	0	0	0	3	0	0	0	0	0	0	0	0	2
Miami	12	0	8	2	0	1	0	0	0	1	0	0	0	0	1
Mitchell	0	0	8	0	0	2	10	0	0	0	0	0	0	0	0
Montgomery, except	0	2	11	5	0	7	8	2	1	2	4	3	0	0	7
Coffeyville	6	0	4	0	3	1	1	0	2	5	0	0	0	0	3
Independence	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Morris	0	0	1	2	0	2	28	0	0	1	0	0	0	0	0
Morton	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0
Nemaha	1	0	0	0	3	0	1	0	0	3	3	0	0	0	0
Neosho, except	6	6	0	0	0	0	2	0	0	5	2	1	0	0	4
Chanute	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ness	1	0	0	0	0	2	11	0	0	0	0	0	0	0	0
Norton	1	0	3	0	0	0	7	0	0	0	0	0	0	0	0
Osage	1	0	1	2	0	2	0	0	0	1	0	2	0	1	2
Osborne	0	0	1	0	0	1	3	0	2	3	0	0	0	0	0
Ottawa	1	0	0	0	0	0	32	0	0	2	4	0	0	0	0
Pawnee	0	0	10	0	0	10	23	0	1	2	14	1	0	0	1
Phillips	0	0	4	0	0	1	14	0	0	0	0	0	0	0	0
Pottawatomie	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0
Pratt	0	0	4	0	0	2	19	0	1	9	0	0	0	0	0
Rawlins	1	1	7	0	0	0	6	0	0	0	0	0	0	0	0
Reno, except	1	0	9	0	0	9	1	0	7	0	0	0	0	0	3
Hutchinson	7	1	45	12	0	4	38	1	2	7	0	2	0	0	9
Republic	0	0	7	0	0	1	7	0	0	0	0	0	0	0	0
Rice	0	0	5	0	0	2	19	0	3	0	0	2	0	0	2
Riley, except	0	1	0	5	0	6	3	0	4	4	0	0	0	0	0
Manhattan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rooks	0	0	8	0	0	0	6	0	0	0	0	0	0	0	0
Rush	0	0	0	0	0	1	11	0	0	1	0	0	0	0	0
Russell	0	0	6	1	0	0	11	6	0	0	0	0	0	0	0
Saline, except	0	0	2	1	0	0	2	0	0	0	0	0	0	0	0
Salina	3	0	6	5	0	7	2	0	12	2	0	0	0	0	3
Scott*	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sedgwick, except	0	0	0	0	0	3	9	1	0	1	0	0	0	0	0
Wichita	5	0	37	12	0	26	382	0	29	126	1	2	0	0	36
Seward	0	0	0	0	0	10	0	0	0	0	0	0	0	0	0
Shawnee, except	0	0	2	0	0	3	0	0	2	1	0	0	0	0	3
Topeka	18	1	58	0	0	6	6	0	15	170	1	3	0	0	34
Sheridan	2	0	3	0	0	2	3	0	0	1	0	0	0	0	1
Sherman	1	0	1	0	0	1	0	0	0	0	2	1	0	0	0
Smith	0	0	0	0	0	0	6	0	2	0	0	0	0	0	1
Stafford	2	0	5	3	0	2	38	0	0	0	0	0	0	0	0
Stanton	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0
Stevens	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sumner, except	11	0	1	2	0	11	39	0	7	6	2	1	0	0	1
Wellington	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Thomas	0	0	8	0	0	0	0	0	0	0	0	0	0	0	1
Trego	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Wabaunsee	0	1	2	6	0	7	5	0	0	1	0	0	0	0	0
Wallace	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0
Washington	0	0	2	0	0	5	0	0	0	0	0	0	0	0	0
Wichita	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wilson	1	1	2	0	0	0	2	0	0	2	0	1	0	0	0
Woodson	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
Wyandotte, except,	1	0	2	1	2	0	1	0	2	0	0	0	0	0	0
Kansas City	21	3	52	15	0	6	60	1	19	80	6	4	0	0	66
Rosedale	0	0	0	0	0	0	0	0	0	0	0	0	0	0	177

* No report.

Other communicable diseases: Cancer, 31; chancroid, 6; erysipelas, 13; gonorrhœa, 229; septic sore throat, 1; syphilis, 168; trachoma, 3.

Periodic Physical Examination a National Need.

Abstract of an address by EUGENE LYMAN FISK, M. D., Medical Director, Life Extension Institute, New York City.

We have been accustomed to look upon Great Britain as an empire deriving its power preëminently from the physical excellence of its citizens. It must be obvious that brain and brawn were required to spread this empire over the earth, and its ideals of physical training and physical prowess have always been high; yet the physical try-out of that nation at the time of the war elicited information that staggered the statesmen of the island empire. The spirit of Britain was still there, but, according to the statistics, the flesh was weak. How deeply this lesson was taken to heart by the best friends of Britain is shown by the following quotation of the report of the committee of the Ministry of National Service covering the examination of 2,425,184 of military age, from eighteen to forty-two, 1917-'18:

"(1) Thirty-six per cent were placed in grade I: *i. e.*, approximately only one in every three had attained the full normal standard of health and strength and was judged capable of enduring physical exertion suitable to his age. The remaining 64-65 per cent, or two out of every three examined, over a million and a half in the aggregate, did not attain this standard.

"(2) Between 22 and 23 per cent were placed in grade II: *i. e.*, approximately one in five did not reach the standard of grade I and were judged to be capable of undergoing only such physical exertion as does not involve severe strain.

"(3) Between 31 and 32 per cent were placed in grade III: *i. e.*, approximately one in every three presented marked physical disabilities or such evidence of past disease that they were not considered fit to undergo the degree of physical exertion required for the higher grades. They may be regarded, for practical purposes, as the "C 3" men of the army nomenclature, whose physical condition became during the war a household word, which bids fair to become a standing addition to our phraseology, at least during the lifetime of the present generation.

"(4) Rather more than 10 per cent were placed in grade IV: *i. e.*, approximately one in every nine or ten were judged to be totally and permanently unfit for any form of military service."

These four inferences may be summarized by saying that medical examinations showed that, of every nine men of military age in Great Britain, on the average, three were perfectly fit and healthy; two were upon a definitely infirm plane of health and strength, whether from some disability or failure in development; three were incapable of undergoing more than a very moderate degree of physical exertion and could almost (in view of their age) be described with justice as physical wrecks; and the remaining man as a chronic invalid with a precarious hold upon life.

The committee then discusses the possible fallacies in the interpretation of such figures, and, after allowing for all such possible fallacies, arrives at the following conclusions:

"It seems probable, therefore, that the men examined during the year under review may be regarded in the aggregate as fairly representing the manhood of military age of the country in the early part of the twentieth century from the standpoint of health and physique, and that deductions founded upon the observations made at the medical examinations of these men may legitimately be looked upon as a trustworthy criterion of the national health of this period.

War is a stern taskmaster, with whom no compromise is possible, as we have learned to conviction during the past four years. Convention, prejudice, self-satisfaction, apathy—all alike have to give way before the icy blast of war, which sweeps before it everything except hard facts. It has forced us to face our manpower problem with the close intensity which only a struggle for national existence can evoke. It has compelled us to take stock of the health and physique of our manhood. This stock taking has brought us face to face with ugly facts, and, one hopes, awakened us from the half-hearted complacency with which in the past we have treated our most important asset—the health of the nation."

This is straight talk. It is better than millions of words of national self-glorification and blunt-eyed refusal to recognize not only the sources of national decay, but the factors that make for the decay of civilized mankind.—*The Nation's Health.*

The National Health Council.

So many different organizations for promoting the health of the American people have sprung into being in the last few years that an imperative necessity has arisen for their coöperation, if not consolidation. It is to serve this purpose that the National Health Council has recently been organized.

The National Health Council at present is composed of representatives of the following important organizations: American Public Health Association, American Red Cross, American Social Hygiene Association, Conference of State and Provincial Health Authorities of North America, Council of Health and Public Instruction of the American Medical Association, National Child Health Council, National Committee for Mental Hygiene, National Organization for Public Health Nursing, National Tuberculosis Association, United States Public Health Service.

It does not consolidate the work of these groups, but it does aim to coördinate their functions, and, so far as possible, to avoid duplication of effort and assure harmonious working along the various lines of health activity undertaken by these organizations.

The National Health Council has an office in New York city, at 370 Seventh avenue, and has at present for its executive officer Dr. Donald B. Armstrong, the man who made such a marked success of the demonstration against tuberculosis which is known to the medical profession as "the Framingham demonstration."

At the annual meeting of the Conference of State and Provincial Health Authorities of North America, held in Boston, June 1 and 2, Dr. S. J. Crumbine, secretary of the Kansas State Board of Health, was elected as the conference representative on the National Health Council. On June 8, at a meeting of the National Health Council, Doctor Crumbine was elected recording secretary of the council. This honor to Kansas does not mean that Doctor Crumbine will be taken away from his work in Kansas.

C. H. L.

Report of Public Health Laboratory for May, 1921.

JUNE 2, 1921.

MEMORANDUM.

To: Secretary State Board of Health.
From: Public Health Laboratory.
Subject: Report of work done for the month of May, 1921.

	May.		*April.*	
1. Complement fixation test—*For syphilis:*				
Blood specimens from physicians:				
Positive	49		78	
Negative	341		226	
Doubtful	41		32	
Unsatisfactory specimens	22		4	
Totals		453		340
Blood specimens from Lansing:				
Positive	5		30	
Negative	38		81	
Doubtful	22		17	
Unsatisfactory specimens	1		1	
Totals		66		129
Spinal fluid:				
Positive	4		3	
Negative	5		8	
Doubtful	2		3	
Unsatisfactory specimens	1		...	
Totals		12		14
For Gonorrhœa: Blood from physicians:				
Negative		1		....
2. Examination of sputum for tuberculosis:				
Positive	14		22	
Negative	128		140	
Unsatisfactory	2		1	
Totals		144		163
3. Examination of cultures for diphtheria:				
Positive	10		20	
Negative	106		101	
No growth	18		16	
Unsatisfactory	...		2	
Totals		134		139
4. Examination of smears for gonococcus:				
From physicians:				
Positive	8		11	
Negative	25		34	
Unsatisfactory	4		2	
Totals		37		47
From Lansing:				
Positive	6		3	
Negative	165		132	
Totals		171		135
5. Examination of Widals for typhoid fever:				
Positive	2		4	
Negative	13		13	
Unsatisfactory	6		4	
Totals		21		21
6. Miscellaneous examinations:				
Stool specimen for typhoid fever	3		...	
Animal heads for rabies	4		...	
Urine for tuberculosis	4		...	
Spinal fluid for tubercular meningitis	1		...	
Spinal fluid for meningococcus	2		...	
Smear for Vincent's angina	2		...	
Blood smear for malaria	1		...	
Blood smear for bacterial examination	1		...	
Smear from eye for bacterial examination	1		...	
Material from gland for tuberculosis examination,	2		...	
Blood culture for streptococcus examination	1		...	
Totals		22		15
Grand totals		1,061		1,003

Report of Public Health Laboratory for June, 1921.

JULY 2, 1921.

MEMORANDUM.

To: Secretary State Board of Health.
From: Public Health Laboratory.
Subject: Report of work done by Laboratory for the month of June, 1921.

	June.		*May.*	
1. Complement fixation test—*For syphilis:*				
Blood specimens from physicians				
Positive	65		49	
Negative	312		341	
Doubtful	39		41	
Unsatisfactory specimens	24		22	
Totals		440		453
Blood specimens from Lansing:				
Positive	19		5	
Negative	93		38	
Doubtful	29		22	
Unsatisfactory specimens	10		1	
Totals		151		66
Spinal fluid:				
Positive	12		4	
Negative	5		5	
Doubtful	2		2	
Unsatisfactory specimen	...		1	
Totals		19		12
For Gonorrhœa: Blood from physicians:				
Negative		1		1
2. Examination of sputum for tuberculosis:				
Positive	31		14	
Negative	111		128	
Unsatisfactory	11		2	
Totals		153		144
3. Examination of cultures for diphtheria:				
Unsatisfactory	0		0	
Positive	14		10	
Negative	51		106	
No growth	14		18	
Totals		79		134
4. Examination of smears for gonococcus:				
From physicians:				
Positive	5		8	
Negative	36		25	
Unsatisfactory specimens	0		4	
Totals		41		37
From Lansing:				
Positive	3		6	
Negative	79		165	
Unsatisfactory specimens	1		0	
Totals		83		171
5. Examination of Widals for typhoid fever:				
Positive	5		2	
Negative	22		13	
Unsatisfactory	10		6	
Totals		37		21
6. Miscellaneous examinations:				
Animal heads for rabies	4		...	
Stool specimen for bacillary dysentery	1		...	
Stool specimen for amœbic dysentery	1		...	
Stool specimen for typhoid	2		...	
Blood smears for malaria	2		...	
Urine for tuberculosis	10		...	
Pus for tuberculosis	1		...	
Pus for gonococcus examination	1		...	
Pus from shoulder	1		...	
Blood cultures for typhoid	2		...	
Totals		25		22
Grand totals		1,029		1,061

Report of Division of Water and Sewage, May, 1921.

ALBERT H. JEWELL, Chief.

Permits Issued or Refused for Waterworks and Sewerage.

Date.	*Place.*	*Nature of improvement.*
May 16	Miller	Sewerage and sewage disposal.
May 19	Arkansas City	Sewerage and sewage disposal.
May 21	Ottawa	Water-filtration plant.
May 31	Emporia	Treated sewage.

Final Inspections on Completed Work.

Date.	*Place.*	*Nature of improvement.*
May 7	Florence	New water supply.
May 17	Arcadia	Waterworks.
May 26	Hanover	New sewage system.

Inspections Made.

Date.	*Place.*	*Nature of improvement.*
May 6	Onaga	City waterworks.
May 6	Onaga	U. P. private supply.
May 15	Baldwin	Waterworks.
May 18	Parsons	City waterworks.
May 18	Parsons	Globe bottling works.
May 19	Coffeyville	City waterworks.
May 19	Coffeyville	Crystal springs.
May 19	Coffeyville	Bottled works.
May 19	Cherryvale	City waterworks.
May 19	Cherryvale	Sewage disposal.
May 19	Greenleaf	New wells; run alkalinity tests.
May 20	Sedan	City waterworks.
May 20	Sedan	Sewage disposal.
May 20	Peru	Sewage disposal.
May 16–19	Washington	Water-filtration plant.
May 16–19	Washington	Sewage disposal.
May 21	Caney	Waterworks.
May 21	Cedarvale	Waterworks.
May 21	Cedarvale	Santa Fe private supply.
May 23	Jamestown	City waterworks; new wells.
May 23	Jewell City	Filter plant.
May 24	Elk City	City waterworks.
May 24	Independence	City waterworks.
May 24	Independence	Sewage disposal.
May 24	Independence	S. A. R. Co., refinery waste.
May 24	Independence	Aganippe springs, bottled water.
May 25	Altoona	City waterworks.
May 25	Neodesha	City waterworks.
May 25	Neodesha	Sewage disposal.
May 25	Neodesha	Maxwell, bottled water.
May 25	Beloit	City water supply.
May 25	Clifton	Proposed sewer system.
May 25	Fredonia	City waterworks.
May 25	Fredonia	Delaware springs.
May 26	Humboldt	City waterworks.
May 26	Humboldt	Sewage disposal.
May 26	Iola	Sewage disposal.
May 26	Iola	City waterworks.
May 27	Colony	Santa Fe private supply hauled from Ottawa.
May 27	Garnett	City waterworks.
May 27	Garnett	Sewage disposal.

Plans or preliminary reports have been received or conferences have been held with municipal authorities for new work at the following places:

Anthony	Additional water supply.
Atwood	Sewerage and sewage disposal.
Emporia	Water improvements.
Garden City	Additional water supply.
Gypsum	Municipal water supply.
Howard	Water supply.
Howard	Sewerage.
Manhattan	Water-softening plant.

Kansas City	Garbage disposal.
Oswego	Sewage disposal.
La Crosse	Additional water supply.
Peabody	Extensions to water system.
Salina	Sewage disposal.
White Water	New water supply.
Wichita	Additional waterworks.

Record of analyses made in Water and Sewage Laboratory at Lawrence during May, 1921:

	Bact.	*Chem.*
City supply	555	36
Bottled waters	5	1
Private supplies	81	1
Railroad supplies	7	..
Miscellaneous	4	7
Ice	29	..
Ice supply	2	..
Totals	683	45—728

Licenses Issued.

Date.	*Place.*	*Person or firm and purpose.*
May 3	Atchison	Santa Fe. City supply.
May 3	Atchison	Burlington. City supply.
May 3	Atchison	Missouri Pacific. City supply.
May 10	Bonner Springs	K. C. K. V. & W. City supply.
May 10	Burlington	Santa Fe. City supply.
May 24	Downs	Missouri Pacific. City supply.
May 24	Ellinwood	Santa Fe. City supply.
May 10	Ellsworth	Frisco. City supply.
May 10	Herington	Rock Island. City supply.
May 10	Highland	Grand Island. City supply.
May 10	Highland	Union Pacific. City supply.
May 10	Hoisington	Missouri Pacific. City supply.
May 24	Horton	Rock Island. Private supply.
May 10	Little River	Santa Fe. City supply.
May 10	Newton	Ark. Val. Interurban. City supply.
May 10	Newton	Santa Fe. City supply.
May 24	Onaga	Union Pacific. Private supply.
May 3	Ottawa	Santa Fe. City supply.
May 10	Paola	Mo. K. & T. City supply.
May 10	Pittsburg	K. C. Southern. City supply.
May 10	Pittsburg	Frisco. City supply.
May 24	Pratt	Wichita Northwestern. City supply.
May 10	Strong City	Santa Fe. City supply.
May 10	Wichita	Ark. Val. Interurban. City supply.
May 10	Wichita	Santa Fe. City supply.
May 10	Wichita	Rock Island. City supply.
May 10	Wichita	Midland Valley. City supply.
May 10	Wichita	Missouri Pacific. City supply.
May 10	Wichita	Frisco. City supply.
May 2	Haverhill	Eugene Ridge. Bottled water.
May 11	Atchison	Home Ice. Co. Manufactured ice.
May 19	Augusta	Augusta Ice Co. Manufactured ice.
May 19	Beattie	City Ice Plant. Manufactured ice.
May 11	Burden	Sentel & Son. Manufactured ice.
May 11	Bushton	D. O. Huebner. Manufactured ice.
May 11	Caney	Caney Ice & St. Co. Manufactured ice.
May 24	Garden City	Garden City Ice Co. Manufactured ice.
May 24	Hesston	Hesston Creamery & Ice Co. Manufactured ice.
May 11	Hutchinson	Carey Salt Co. Manufactured ice.
May 11	Independence	Crystal Ice & Fuel Co. Manufactured ice.
May 24	La Harpe	La Harpe Ice Co. Manufactured ice.
May 11	Larned	D. Holman & Son. Manufactured ice.
May 24	Lawrence	Ice & Storage Co. Manufactured ice.
May 11	Lindsborg	Lindsborg Ice & St. Co. Manufactured ice.
May 11	Mound Ridge	Polar Ice Co. Manufactured ice.
May 11	Oberlin	H. B. Vernon. Manufactured ice.
May 11	Paola	Paola Crystal Ice Co. Manufactured ice.
May 11	Parsons	Parsons C. S. & Ice Co. Manufactured ice.
May 11	Russell	Ira D. Crofoot. Manufactured ice.
May 19	Sylvan Grove	Skaggs & Kreps. Manufactured ice.
May 11	Waterville	W. R. Summers. Natural ice.
May 24	Westmoreland	H. M. Pomeroy. Natural ice.

Hospitalizing Tuberculosis Cases.

Resolution adopted by the Council of Health and Public Instruction of the American Medical Association at the Boston meeting, held June, 1921.

WHEREAS, There is an unfortunate tendency in the various parts of the United States to exclude patients, even of tender years, with pulmonary tuberculosis from general hospitals; and

WHEREAS, This tendency results chiefly from the incomplete knowledge of an earlier period, when the simple prophylactic measures were not thoroughly understood and when the danger of dissemination were greatly overestimated; and

WHEREAS, The exclusion of tuberculosis patients from general hospitals has resulted in depriving large numbers of tuberculosis patients from proper hospital care in emergencies and in their exile, against their wishes, to special institutions often remote from home and friends; and

WHEREAS, This practice has resulted in the relegation of tuberculosis largely to specialists, to the great detriment both of tuberculosis patients, who are thus compelled to seek in special places the necessary medical skill, and of the general practitioner of medicine, who is thus deprived of the opportunity to acquaint himself with the diagnosis and treatment of tuberculosis; and

WHEREAS, It has been demonstrated in a rapidly increasing number of institutions that tuberculosis patients may be admitted to separate wards in general hospitals without detriment to other patients; and

WHEREAS, The admission of tuberculosis patients to general hospitals for temporary periods will tend to allay phthisiphobia, improve the home treatment of tuberculosis and popularize the home climates without in any way discounting the value and need of special tuberculosis sanatoria for patients suitable for and desiring treatment therein: Be it

Resolved, That the American Medical Association recommends that general hospitals of every character in all parts of the United States should provide separate rooms for the care of tuberculosis patients, and that such patients be never denied admission, at least in emergency and for temporary periods, because of the character of the disease from which they are suffering.

Food Analysis LXXII.

APRIL 1, 1921.

E. H. S. BAILEY, Director; W. S. LONG, Chemist in Charge.

BEVERAGES.

22902. Beverage. "Home Brew." From G. W. Hill, food inspector, Topeka. "Preserved with sodium benzoate." Alcohol, 2 per cent. Illegal.

22944. Beverage. Santa Fe unclaimed freight. Topeka. Alcohol, 0.75 per cent. Sweetened with saccharin. Illegal.

50409. Beverage. "Bracer, Mexicola Flavor." L. R. Carter, Paxico. Red Cross Mfg. Co., St. Louis. Alcohol and saccharin not found.

93527. Ginger Ale. Coca Cola Bottling Co., Topeka. Contains capsicum. Illegal.

93528. Ginger Ale Extract. Coca Cola Bottling Co., Topeka. Foote & Jenks, Jackson. Mich., manufacturer. Found to contain capsicum. Illegal.

93529. Ginger Ale. Capitol City Bottling Co., Topeka. Passed.
93530. Ginger Ale Extract. Capitol City Bottling Co., Topeka. Passed.
93531. Ginger Ale. Diamond Bottling Co., Topeka. Passed.
93532. Ginger Ale Extract. Diamond Bottling Co., Topeka. The Liquid Carbonic Co., Kansas City, Mo., manufacturer. Passed.
93533. Ginger Ale Extract. Diamond Bottling Co., Topeka. Foote & Jenks, Jackson, Mich., manufacturer. Found to contain capsicum. Illegal.

CATSUP.

286. Catsup. Punch Brand. Distributed by Ridenour-Baker Grocery Co., Kansas City, Mo. From the city food inspector, Topeka. Dead bacteria per cc., 45,000,000; yeasts and spores per $^1/_{60}$ cm., 250; per cent of microscopic fields showing molds, 40. Illegal.
1374. Catsup. Jayhawk Brand. From the State School for the Blind, Kansas City, Kan. McCord-Kistler Merc. Co., Topeka and Emporia. Dead bacteria per cc., 35,000,000; yeasts and spores per $^1/_{60}$ cm., 200; per cent of microscopic fields showing molds, 30. Illegal.
22901. Catsup. Columbia Girl Brand. Topeka Wholesale Grocery Co. F. W. Vance Co., Columbia City, Ind. Dead bacteria per cc., 75,000,000; yeasts and spores per $^1/_{60}$ cm., 80; per cent of fields showing molds, 35. Illegal.

NOTE.—The legal limits for bacteria, yeasts and spores and molds are as follows: Dead bacteria per cc., 25,000,000; yeasts and spores, per cm., 25; molds, 25 per cent of fields.

HONEY.

283. Honey. Heinley & Kanoff, 313 Kansas avenue, Topeka. Sent by the Food Inspection Department, Topeka. Adulterated with corn syrup. Illegal.
400. Honey. Thomas Horsfield, Topeka. H. D. Lee Merc. Co., Kansas City, Mo. Passed.
93615. Honey. Heinley & Kanoff, Topeka. Adulterated with corn syrup. Illegal.
93615. Honey. Heinley & Kanoff, Topeka. Passed.
93617. Honey. Heinley & Kanoff, Topeka. Product is off color and flavor.

PREPARED MUSTARD.

73039. Salad Mustard. Gold Band Brand. Jewett & Sherman Co., Milwaukee, Wis., manufacturer. Nortonville Merc. Co., Nortonville, Kan. Passed.
73040. Horse Radish Cream. Red Brand. The Olds Products Co., Chicago, Ill., manufacturer. J. W. Casby, Nortonville, Kan. Passed.
73041. Prepared Mustard. Symms Grocery Co., Atchison, Kan. E. W. Kaufman, Nortonville, Kan. Crude fiber (water, salt, and fat-free basis), 13.6. Indicates an excess of mustard hulls. Illegal.
73042. Prepared Mustard. Murdock's. C. A. Murdock Mfg. Co., Kansas City, Mo. Lew Hauck, Valley Falls, Kan. Passed.
73043. Prepared Mustard. H. D. Lee Merc. Co., Kansas City, Mo. E. J. Owens. Valley Falls, Kan. Passed.
73044. Prepared Mustard. McCord-Kistler Merc. Co., Topeka. Max Beyer, Valley Falls, Kan. Passed.
73045. Prepared Mustard. Paxton & Gallagher, Omaha, Neb. George R. Jones, Sabetha, Kan. Passed.
73046. Prepared Mustard. Acropolis Brand. Nave-McCord Merc. Co., St. Joseph, Mo. Passed.
73047. Prepared Mustard. French's. R. F. French Co., Rochester, N. Y. E. M. Newman, Sabetha, Kan. Passed.
73048. Prepared Mustard. Eddy's. Eddy & Eddy Mfg. Co., St. Louis, Mo. E. M. Newman, Sabetha, Kan. Passed.

JAMS, JELLIES, PRESERVES.

22916. Jelly. "American Maid Brand Pure Fruit Jelly. Grape-Apple." The Paul Delaney Co., Brocton, N. Y. Atchison, Topeka & Santa Fe Railway Co., Topeka.
22917. Jelly. "American Maid Brand Pure Fruit Jelly. Plum-Apple." The Paul Delaney Co., Brocton, N. Y. Atchison & Santa Fe Railway Co., Topeka.
22918. Jelly. "American Maid Brand Pure Fruit Jelly. Peach-Apple." The Paul Delaney Co., Brocton, N. Y. Atchison, Topeka & Santa Fe Railway Co., Topeka.
22919. Jam. "Tre-Vyn Jam. Plum. Composed of corn syrup, apple, fruit and cane sugar." Temtor Corn and Fruit Products Co., St. Louis. Atchison, Topeka & Santa Fe Railway Co., Topeka. Misbranded. Illegal.
60794. Jam. "Belco Brand Pure Grape Jam." The Paul Delaney Co., Inc., Brocton, N. Y. J. Green Grocery Co., Kansas City, Mo., jobber. Milgram & Fogel, Kansas City, Kan. Passed.
60814. Jam. "Strawberry Jam. Containing fruit, sugar, corn syrup, added color." Louisville Preserving Co., Louisville, Ky. Help Yourself Grocery, Salina, Kan. Misbranded. Illegal.
93543. Jam. "Tre-Vyn Brand Jam. Combination of 60% corn syrup, 10% apple juice, 15% fruit, 15% sugar, plum." Best-Clymer Mfg. Co., St. Louis. The Jett & Wood Merc. Co., Wichita. Misbranded. Sugar as sucrose, 13 per cent. Corn syrup, 61 per cent. Illegal.

NOTE.—According to legal standards and to household practice, a jam is made from a fruit or a mixture of fruits. Apple juice does not constitute a fruit. Apple juice, exclusive of the other edible portions of the apple, has no place in a jam, according to standards and usage.

93544. Jam. "Tre-Vyn Jam Raspberry. Combination of 60% corn syrup; 10% apple juice, 15% fruit, 15% sugar." Best-Clymer Mfg. Co., St. Louis. Misbranded. Product is a substitute for glucose jam. Illegal.

93545. Jelly. "Shady Dell Brand Jelly. Apple-Blackberry-Sugar." Best-Clymer Mfg. Co., St. Louis. The Jett & Wood Merc. Co., Wichita. Corn syrup present. Adulterated. Illegal.

93546. Preserves. (Derby Brand Pure Fruit Preserves. Apple Juice, Apricots, Sugar. Prepared with $^{1}/_{10}$ of 1% tartaric acid." Glaser-Crandell Co., Chicago. The Wichita Wholesale Grocery Co., Wichita. Not a pure fruit preserve. Illegal.

93547. Preserves. "Derby Brand Pure Fruit Preserves. Apple Juice, Blackberries, Sugar. Prepared with $^{1}/_{10}$ of 1% tartaric acid." Glaser-Crandell Co., Chicago. The Wichita Wholesale Grocer Co., Wichita. Not a pure fruit preserve. Illegal.

93548. Preserves. "Derby Brand Pure Fruit Preserves. Apple Juice, Plums, Sugar. Prepared with $^{1}/_{10}$ of 1% tartaric acid." Glaser-Crandell Co., Chicago. The Wichita Wholesale Grocer Co., Wichita. Tartaric acid. Illegal.

93549. Jelly. "Derby Brand Apple-Grape Jelly, with $^{1}/_{10}$ of 1% tartaric acid." Glaser-Crandell Co., Chicago. The Wichita Wholesale Grocer Co., Wichita. Tartaric acid. Illegal.

93550. Preserves. "Harvester Brand Preserves. Apple-Raspberries-Sugar." Best Clymer Mfg. Co., St. Louis. The Wichita Wholesale Grocer Co., Wichita. Corn syrup, 5.6 per cent. A glucose preserve. Misbranded and adulterated. Illegal.

93551. Preserves. "Blackberry Preserves." Gohl Pickle and Preserves Co., Chicago. Passed.

93552. Preserves. "Kellogs, Keokuk, Iowa. Apple and Strawberry Preserves. Added color."

93553. Jam. "Corn Syrup Jam. A compound made from corn syrup, sugar, apple juice, and red raspberries." Orchard Products Co., Chicago. Lehmann-Higginson Groc. Co., Wichita. Misbranded. A substitute for corn-syrup jam, since one part only of the edible portion of the apple is used. Illegal.

93554. Jelly-Spread. "Jelly-Spread. Spread it on bread. A compound made from grape juice, apple juice, corn syrup and sugar. Absolutely pure. Orchard Products Co., Chicago." Lehmann-Higginson Groc. Co., Wichita.

93555. Preserves. "Always Good Brand Pure Fruit Preserves. Apple and Strawberry." None Such Products Co., Chicago. The Lehmann-Higginson Groc. Co., Wichita.

93556. Jam. "Columbia Brand Jam. Composed of corn syrup, apple juice, fruit, sugar, strawberry." Best-Clymer Mfg. Co., St. Louis. Lehmann-Higginson Groc. Co., Wichita. Misbranded. A substitute for glucose jam. Illegal.

93557. Jam. "Columbia Brand Jam. Composed of corn syrup, apple juice, fruit, sugar, plum." Best-Clymer Mfg. Co., St. Louis. Lehmann-Higginson Groc. Co., Wichita. Misbranded. A glucose jam substitute. Illegal.

93558. Preserves. "Peach Preserves Compound. Corn syrup, apple juice, fruit, granulated sugar. Harmless color; 0.1 of 1% benzoate of soda. Added phosphate." The Standard Syrup Co., St. Louis. Lehmann-Higginson Groc. Co., Wichita. Misbranded. A glucose preserves substitute. Illegal.

93559. Preserves. "Standard Syrup Company Cherry Preserves. Compound. Corn syrup, apple juice, fruit, granulated sugar. Harmless color; 0.1 of 1% benzoate of soda. Added phosphate." Standard Syrup Co., St. Louis. Lehmann-Higginson Groc. Co., Wichita. Misbranded. A substitute for glucose preserves. Illegal.

93563. Jam. "Old Inn Black Raspberry Jam, Mixed with Apple Jelly." Curd & Blackemore Co., Louisville, Ky. The Winfield Wholesale Gros. Co., Wichita. Misbranded. Product should be labeled conspicuously as a mixture of jam and jelly.

93564. Preserves. "Clovernook Brand Pure Preserves. Peach-Apple." The Lippincott Co., Cincinnati, O. The Winfield Wholesale Groc. Co., Wichita. Misbranded. Pineapple present instead of peach.

93565. Preserves. "Clovernook Brand Pure Preserves. Pineapple-Apple." The Lippincott Co., Cincinnati. The Winfield Wholesale Groc. Co., Wichita.

93566. Preserves. "Clovernook Brand Pure Preserves. Strawberry-Apple." The Lippincott Co., Cincinnati. The Winfield Wholesale Groc. Co., Wichita.

93567. Preserves. "Clovernook Brand Pure Preserves. Plum-Apple." The Lippincott Co., Cincinnati. The Winfield Wholesale Groc. Co., Wichita.

VINEGAR.

1354. Vinegar. Interstate Merc. Co., Louisburg, Kan. For acid test. Passed.

22938. Vinegar. From Holcomb, Kan. Analyzed on request. Cider vinegar with added distilled vinegar or dilute acetic acid. Illegal.

50361. Vinegar. Maple Brand. Riley-Wilson Groc. Co., Kansas City, Mo. A. L. Guy, Wakefield, Kan. Contains added distilled vinegar or dilute acetic acid. Illegal.

50362. Vinegar. Poehler King Brand Cider Vinegar. Poehler Merc. Co., Topeka. A. L. Guy, Wakefield. Passed.

73058. Vinegar. Heinz Distilled White Vinegar. H. J. Heinz Co., Pittsburg, makers. Deeter & Holsinger, Norcatur, Kan. Passed.

73061. Vinegar. Orchard Brand Cider Vinegar. Packed for Bittman-Todd Grocer Co., Leavenworth. M. P. Ward, Almena, Kan. Contains added dilute acetic acid or distilled vinegar. Illegal.

93569. Vinegar. Jayhawk Brand Pure Cider Vinegar. McCord-Kistler Merc. Co., Topeka and Emporia. Kuehne Bros., manufacturers, Topeka. Passed.

93570. Vinegar. Jayhawk Brand Pure Cider Vinegar. McCord-Kistler Merc. Co., Topeka and Emporia. Kuehne Bros., manufacturers. Topeka. Passed.

93571. Vinegar. Good Buy Brand Colored Distilled Vinegar. McCord-Kistler Merc. Co., Topeka and Emporia. Kuehne Bros., Topeka.

93572. Vinegar. F. W. Brand Pure Cider Vinegar. Fleming-Wilson Merc. Co., Topeka. Kuehne Bros., manufacturers, Topeka. Passed.

93573. Vinegar. F. W. Brand. Fleming-Wilson Merc. Co., Topeka. Kuehne Bros., manufacturers, Topeka. Passed.

93579. Cider Vinegar. The Theo. Poehler Merc. Co., Topeka. Kuehne Bros., manufacturers, Topeka. Passed.

93580. Vinegar. Colored Distilled Vinegar. The Theo. Poehler Merc. Co., Topeka. Kuehne Bros., manufacturers, Topeka. Formic acid, 9 mg. per 100 cc. Artificially colored.

83581. Vinegar. Welworth Brand Pure Cider Vinegar. The Theo. Poehler Merc., Co., Topeka. Kuehne Bros., manufacturers, Topeka. Contains added dilute acetic acid or distilled vinegar. Illegal.

93594. Vinegar. Heinz Pure Cider Vinegar. H. J. Heinz Co., Pittsburg, makers. Passed.

MISCELLANEOUS.

278. "Home Brew." From the Food Inspection Department, Topeka. For police case. Alcohol, 1.6 per cent. Illegal.

279. "Home Brew." From the Food Inspection Department, Topeka. For police case. Alcohol, 2.6 per cent. Illegal.

285. Pumpkin. The Symns Grocer Co., Atchison, jobber. D. D. Knox, Topeka. Passed.

1343. Pig's Stomach. Kanopolis, Kan. Poison not found.

1348. Raisins. State School for the Blind. Insects present. Inferior product. Illegal

1349. Tomatoes. State School for the Blind. Passed.

1355. Cider. From the Food Inspection Department, Topeka. Frank Demboski, Topeka, retailer. Alcohol, 1.75 per cent. Illegal.

1356. Cider. Food Inspection Department, Topeka. Frank Demboski, retailer. Alcohol, 1.1 per cent. Illegal.

1358. Cider. Food Inspection Department, Topeka. Frank Demboski, retailer. Alcohol, 3.3 per cent. Illegal.

1359. Beverage. Taken by revenue officer from a Greek shining parlor, Lawrence. Alcohol, 7.13 per cent. Illegal.

1360. Sputum. Request for analysis for arsenic. Arsenic not found.

1361. Milk. From Hiawatha, Kan. Said to have produced illness. No poison detected.

1363. Flour. State Hospital, Parsons, Kan. Bakers said to have had trouble in baking. The flour makes normal loaf. Passed.

1364. Cream. W. A. Dunmire, Lawrence. Passed.

1365. "White Mule." From the Pottawatomie Agency, Mayetta, Kan. Alcohol, 5.93 per cent. Illegal.

1366. "Wine." From G. G. Garvin, sheriff, Anthony, Kan. Alcohol, 11.56 per cent. Illegal.

1367. Mother's Milk. From Burlington, Kan. Complete analysis shows it to be normal.

1371. Flour. From the city physician, Wichita, Kan. Said to have produced violent illness in a number of people. Found to contain lead and arsenic, probably in the form of arsenate of lead.

1372. Chicken Tonic. From Arkalon, Kan. Found to be colored turpentine.

1373. Beverage. From the county attorney of Osage county. Alcohol, 45.37 per cent. Illegal.

1378. Berries. Wilson & Co., Kansas City, Kan. Fermentation found in some cans, but product considered suitable for consumption. Passed.

1379. Kraut. Wilson & Co., Kansas City, Kan. Some cans were found to be "swells," with contents of bad odor. Not fit for food. Illegal.

93540. Malt Sugar Syrup. Atlas Brand. The Murry Mfg. Co., Wichita. U. S. Food Corporation. A. H. Myers, Kiowa, Kan. Passed.

Drug Analysis LXII.

L. E. SAYRE, Director; L. D. HAVENHILL, Chief; C. M. STERLING, Microscopist; G. N. WATSON, Analyst.

The various classes of drug preparations herewith reported show in some exceptional cases a lower standard than is required by the U. S. P. How it is that essence of peppermint and spirits of camphor contain added water is a problem. We are inclined to think that this may be due oftentimes to the use of substandard alcohol of which the druggist may not be aware. In the case of limewater which contains .14 per cent of calcium hydroxide, it is evident, where one-tenth of that amount is found, it must be due either to the careless preparation of the solution or to the careless keeping of the same.

In the case of sweet spirit of niter, we shall expect to have trouble with this preparation because of its instability. This being the case, it is fair to assume that the time will come when the medical profession will find a more stable nitrite for therapeutic uses.

The dental cream reported is alleged to contain chlorine. It is fair to assume that this element is likely to disappear in such combinations by chemical change. Chlorinated dental cream, it is safe to say, marketed as dental cream, and when the percentage of free chlorine is very small, is likely to lose its virtue from the loss of this element.

Laboratory No. 7686 (aspironal) has been shown to contain, as reported, as one of the ingredients, sodium salicylate. This preparation has been by the United States decision (notice of judgment 9020) declared as misbranded on the ground that the statements appearing on the labels, bottles, articles and boxes regarding the article, as to the curative and therapeutic effect, were "false and fraudulent."

SPIRIT OF CAMPHOR.[*]

Lab. No. 7642. Insp. No. 50370. W. H. Ringer, Paola. Contained 10 grams of camphor per 100 mils. Passed.

Lab. No. 7663. Insp. No. 50391. Geo. W. Morris, Olathe. Contained 9.5 grams of camphor per 100 mils, and trace of added water. Substandard.

Lab. No. 7653. Insp. No. 50381. Humphrey Drug Co., Paola. Contained 12 grams of camphor per 100 mils. and 12.11 per cent added water. Adulterated.

Lab. No. 7658. Insp. No. 50387. Snepp Drug Co., Olathe. Contained 8 grams of camphor per 100 mils. and 11.54 per cent added water. Adulterated.

Lab. No. 7667. Insp. No. 73056. D. G. Addleman, Oberlin. Contained 8 grams of camphor per 100 mils. Substandard.

Lab. No. 7670. Insp. No. 50394. W. T. Hopkins, Williamsburg. Contained 10 grams camphor per 100 mils. Passed.

Lab. No. 7676. Insp. No. 50440. E. W. Hill, Ottawa. Contained 7 grams of camphor per 100 mils. Substandard.

ESSENCE OF PEPPERMINTS.[†]

Lab. No. 7643. Insp. No. 50371. W. H. Ringer, Paola. Contained 10.43 mils. of oil per 100 mils. Passed.

Lab. No. 7649. Insp. No. 50377. W. G. Gsell, Paola. Contained 9.78 mils. of oil per 100 mils. Passed.

Lab. No. 7654. Insp. No. 50380. H. T. Clifton, Paola. Contained 10.43 mils. of oil per 100 mils. Passed.

Lab. No. 7657. Insp. No. 50385. Humphrey Drug Co., Paola. Contained 4.25 mils. of oil per 100 mils. Adulterated.

Lab. No. 7658. Insp. No. 50386. Snepp Drug Co., Olathe. Contained 9.78 mils. oil per 100 mils. Passed.

Lab. No. 7665. Insp. No. 50393. Geo. W. Morris, Olathe. Contained 10.26 mils. of oil per 100 mils. Passed.

Lab. No. 7684. Insp. No. 50408. Morris Drug Co., Emporia. Contained 8.8 mils. oil per 100 mils. and 7.85 per cent added water. Adulterated.

Lab. No. 7675. Insp. No. 50399. W. T. Hopkins, Williamsburg. Contained 9.12 mils. of oil per 100 mils.

Lab. No. 7678. Insp. No. 50402. Fred Kaiser, Ottawa. Contained 11.41 mils. oil per 100 mils. Above standard.

LIMEWATER.[‡]

Lab. No. 7638. Insp. No. 50366. John C. Loch, Lane. Contained .16 per cent calcium hydroxide. Passed.

Lab. No. 7648. Insp. No. 50376. W. E. Gsell, Paola. Contained .16 per cent calcium hydroxide. Passed.

Lab. No. 7662. Insp. No. 53090. Snepp Drug Co., Olathe. Contained .14 per cent calcium hydroxide. Passed.

Lab. No. 7672. Insp. No. 50396. W. T. Hopkins, Williamsburg. Contained .17 per cent calcium hydroxide. Passed.

Lab. No. 7680. Insp. No. 50404. H. W. Stouitz, Osage City. Contained .014 per cent calcium hydroxide. Adulterated.

Lab. No. 7682. Insp. No. 50406. Morris Drug Co., Emporia. Contained .16 per cent calcium hydroxide. Passed.

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[*] Spirit of camphor should contain not less than 9.5 grams and not more than 10.5 grams of camphor per 100 mils.

[†] Essence of peppermint should contain 10 mils. of oil per 100 mils. of the preparation.

[‡] Limewater should contain not less than .14 per cent calcium hydroxide.

TINCTURE OF IODIN.§

Lab. No. 7641. Insp. No. 50369. W. H. Ringer, Paola. Contained 6.1 per cent iodin and 4.5 per cent potassium iodide. Passed.

Lab. No. 7647. Insp. No. 50375. W. E. Gsell, Paola. Contained 6.08 per cent iodin and 4.5 per cent potassium iodide. Passed.

Lab. No. 7654. Insp. No. 50382. Humphrey Drug Co., Paola. Contained 7.63 per cent iodin and 6.8 per cent potassium iodide. Passed.

Lab. No. 7671. Insp. No. 50395. W. T. Hopkins, Williamsburg. Contained 6.8 per cent iodin and 5.2 per cent potassium iodide. Passed.

SWEET SPIRIT OF NITER.**

Lab. No. 7639. Insp. No. 50367. John C. Loch, Lane. Contained 1.9 ethyl nitrite. Substandard.

Lab. No. 7644. Insp. No. 50372. W. H. Ringer, Paola. Contained 2.51 per cent ethyl nitrite. Substandard.

Lab. No. 7651. Insp. No. 50379. H. T. Clyton, Paola. Contained 2.72 per cent ethyl nitrite. Substandard.

Lab. No. 7655. Insp. No. 50383. Humphrey Drug Co., Paola. Contained 5 per cent ethyl nitrite. Above standard.

Lab. No. 7660. Insp. No. 50388. Snepp Drug Co., Olathe. Contained 2.74 per cent ethyl nitrite. Substandard.

Lab. No. 7666. Insp. No. 73055. D. G. Addleman, Oberlin. Contained 3.74 per cent ethyl nitrite. Passed.

Lab. No. 7673. Insp. No. 50397. W. T. Hopkins, Williamsburg. Contained 3 per cent ethyl nitrite. Substandard.

Lab. No. 7677. Insp. No. 50401. Fred Kaiser, Ottawa. Contained 2.49 per cent ethyl nitrite. Substandard.

Lab. No. 7683. Insp. No. 50407. Morris Drug Co., Emporia. Contained 2.81 per cent ethyl nitrite. Substandard.

ALCOHOL.

Lab. No. 7640. Insp. No. 50368. John C. Loch, Lane. Specific gravity, .813; acetone, none; aldehyde and tannin, trace. Passed.

Lab. No. 7645. Insp. No. 50373. W. H. Ringer. Specific gravity, .809; aldehyde and tannin, none; acetone, none. Passed.

Lab. No. 7650. Insp. No. 50378. W. E. Gsell. Specific gravity, .809; aldehyde and tannin, none; acetone, none. Passed.

Lab. No. 7656. Insp. No. 50384. Humphrey Drug Co., Paola. Specific gravity, .809; acetone, none; aldehyde and tannin, none. Passed.

Lab. No. 7661. Insp. No. 50389. Snepp Drug Co., Olathe. Specific gravity, .810; aldehyde and tannin, none; acetone, none. Passed.

Lab. No. 7664. Insp. No. 50392. Geo. W. Norris, Olathe. Specific gravity, .808; aldehyde and tannin, none; acetone, none. Passed.

Lab. No. 7668. Insp. No. 73057. D. G. Addleman, Oberlin. Specific gravity, .809; aldehyde and tannin, trace; acetone, none. Passed.

Lab. No. 7669. Insp. No. 73060. E. C. Brower, Norcatur. Specific gravity, .809; aldehyde and tannin, trace; acetone, none. Passed.

Lab. No. 7674. Insp. No. 50398. W. T. Hopkins, Williamsburg. Specific gravity, .809; aldehyde and tannin, none; acetone, none. Passed.

DISINFECTANTS.

Lab. No. 7631. Insp. No. 50359. Fecto. L. H. Arenberg, Goodland. Contained 3.4 per cent available chlorine. Phenol coefficient, 12.

Lab. No. 7637. Insp. No. 50365. B-K. John C. Loch, Lane. Contained 2.6 per cent available chlorine. Phenol coefficient, 9.7.

Lab. No. 7679. Insp. No. 50403. Ginso's B-D. Brown & Crane, Osage City. Available chlorine, .004 per cent.

Lab. No. 7681. Insp. No. 50405. Ginso's B-D. Brown & Crane, Osage City. Available chlorine, .016 per cent. Phenol coefficient, less than .2.

Lab. No. 7694. Insp. No. 22940. Electrofied chlorine. Ginso's Brand. Available chlorine, 2.89 per cent.

Lab. No. 7695. Insp. No. 22941. Electrofied chlorine. Ginso's Brand. Contained 2.95 per cent available chlorine.

MISCELLANEOUS.

Lab. No. 7634. Insp. No. 22900. Marshall's New Discovery. Contained .02 grams silver nitrate per 100.

Lab. No. 7686. Insp. No. 22920. Aspironal. Jos. M. Abeles, Leavenworth. Contained aromatic cascara, menthol and sodium salicylate.

Lab. No. 7689. Insp. No. 73063. K-17. Doctor Greene, Douglas, Kan. Contained aromatic cascara, sodium salicylate and alcohol.

Lab. No. 7696. Insp. No. 22943. Marshmallow Dental Cream. Ginso's Brand. Contained no available chlorine. Misbranded.

Lab. No. 7699. Insp. No. ——. Oil of Peppermint. Morris Drug Co., Emporia. Passed.

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§ Tincture of iodin should contain not less than 6.5 grams and not more than 7.5 grams of iodin, and not less than 4.5 grams and not more than 5.5 grams of potassium iodide per 100 mils.

** Sweet spirit of niter should contain not less than 3.5 per cent nor more than 4.5 per cent of ethyl nitrite.

Rely on Yourself.

When great Galileo proclaimed that the world
In regular orbit was ceaselessly whirled,
And got—not a convert—for all of his pains,
But only derision and prison and chains,
"It moves, for all that!" was his answering tone,
For he knew, like the earth, he could go it alone.

When Kepler, with intellect piercing afar,
Discovered the laws of each planet and star,
And doctors, who ought to have lauded his name,
Derided his learning and blackened his fame,
"I can wait," he replied, "till the truth you shall own,"
For he felt in his heart he could go it alone.

In battle or business, whatever the game,
In law or in love, it is always the same;
In the struggle for power or the scramble for pelf,
Let this be your motto, "Rely on yourself,"
For whether the prize be a ribbon or throne,
The victor is he who can go it alone.

—*John G. Saxe.*

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Happiness in its final analysis is conditioned on usefulness.

Mirth is God's medicine. Everybody ought to bathe in it. Grim care, moroseness, anxiety—all this rust of life ought to be scoured off by the oil of mirth. It is better than emery. Blessed is he who has a sense of the humorous.—*H. W. Beecher.*

The world delights in sunny people. The old are hungering for love more than for bread. The air of joy is very cheap; and if you can help the poor on with a garment of praise, it will be better for them than blankets.—*Henry Drummond.*

Health is the first of all liberties, and happiness gives us the energy which is the basis of health. To make any one happy, then, is strictly to augment his store of being, to double the intensity of his life, to reveal him to himself, to ennoble him and transfigure him.—*H. F. Amiel.*

THREE HOLES—AND OUT.

Bill Jones dug two holes in his back yard. One was a privy, the other was a well.

Typhoid infection deposited in the privy was taken out at the well.

The sexton dug another hole in the ground.—*Chicago Journal of Sanitation.*

MORBIDITY REPORT FOR JUNE, 1921.

COUNTIES AND CITIES.	Tuberculosis	Typhoid and Paratyphoid	Smallpox	Diphtheria	Influenza	Scarlet Fever	Measles (morbilli)	German Measles (rubella)	Whooping Cough	Chickenpox	Mumps	Pneumonia (all forms)	Meningitis (epidemic)	Poliomyelitis (epidemic)	Other diseases (see Addenda)
THE STATE	226	69	263	113	0	132	276	3	285	129	21	15	2	1	602
Allen, except	2	2	1	4	0	3	1	0	0	1	0	0	0	0	0
Iola	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Anderson	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0
Atchison, except	0	0	4	0	0	0	7	0	0	0	0	0	0	0	0
Atchison city	0	6	1	0	0	1	1	0	0	0	0	0	0	0	1
Barber	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Barton, except	1	0	29	0	0	5	9	0	5	0	0	0	0	0	0
Great Bend	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bourbon, except	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
Fort Scott	1	2	11	10	0	3	0	0	0	0	0	0	0	0	6
Brown	2	0	0	1	0	3	1	0	0	0	0	0	0	0	1
Butler, except	5	0	13	10	0	5	16	0	1	23	2	1	0	0	186
Augusta	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
El Dorado	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chase	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Chautauqua*	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cherokee, except	3	2	1	0	0	0	3	0	9	0	0	0	1	0	2
Galena	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cheyenne	0	0	0	0	0	1	0	0	0	1	2	0	0	0	0
Clark	0	1	0	0	0	0	1	0	2	0	0	0	0	0	0
Clay	3	1	1	0	0	0	1	0	0	1	0	0	0	0	2
Cloud, except	0	0	0	0	0	0	6	0	0	0	0	1	0	0	4
Concordia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coffey	1	0	5	0	0	1	0	0	0	0	0	0	0	0	0
Comanche*	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0
Cowley, except	20	3	0	1	0	5	14	0	4	1	0	0	0	0	6
Arkansas City	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Winfield	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crawford, except	1	1	2	0	0	0	11	0	0	0	0	0	0	0	0
Pittsburg	1	0	2	1	0	1	3	0	0	0	0	0	0	0	0
Decatur	2	0	21	0	0	2	0	0	6	0	0	0	0	0	1
Dickinson	1	0	0	0	0	1	0	0	7	2	0	0	0	0	2
Doniphan	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
Douglas, except	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Lawrence	8	1	0	0	0	0	1	0	2	0	0	0	0	0	8
Edwards	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Elk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Ellis	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ellsworth	0	2	3	0	0	0	9	0	7	0	0	0	0	0	1
Finney	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ford, except	22	2	0	1	0	2	0	0	0	0	2	0	0	0	1
Dodge City	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Franklin, except	6	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Ottawa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Geary, except	0	0	0	0	0	0	3	1	72	3	0	0	0	0	10
Junction City	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gove	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Graham	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Grant*	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Gray	0	0	0	0	0	1	10	0	2	0	0	1	0	0	0
Greeley	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0
Greenwood	1	0	11	1	0	0	0	0	0	0	0	0	0	0	1
Hamilton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Harper	0	0	1	0	0	1	3	0	0	0	0	0	0	0	0
Harvey, except	0	0	0	0	0	1	2	0	0	0	0	0	0	0	1
Newton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Haskell	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hodgeman	0	0	0	0	0	2	3	0	0	0	0	0	0	0	0
Jackson	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Jefferson	0	0	8	1	0	0	0	0	23	0	0	0	0	0	1
Jewell	0	0	1	0	0	0	1	0	4	1	0	0	0	0	0
Johnson	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Kearny	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Kingman	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Kiowa	4	0	0	0	0	2	0	0	3	0	0	0	0	0	0
Labette, except	1	1	8	1	0	0	0	0	0	0	0	0	0	0	10
Parsons	2	1	9	2	0	2	2	0	2	0	0	0	0	0	15
Lane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Leavenworth, except	1	2	1	5	0	0	0	0	0	0	0	1	0	0	1
Leavenworth city,	0	0	0	8	0	0	5	1	0	0	0	0	0	0	6

MORBIDITY REPORT FOR JUNE, 1921—Concluded.

COUNTIES AND CITIES.	Tuberculosis	Typhoid and Paratyphoid	Smallpox	Diphtheria	Influenza	Scarlet Fever	Measles (morbilli)	German Measles (rubella)	Whooping Cough	Chickenpox	Mumps	Pneumonia (all forms)	Meningitis (epidemic)	Poliomyelitis (epidemic)	Other diseases (see Addenda)
Lincoln	2	0	2	0	0	1	0	0	0	0	0	0	0	0	1
Linn	1	0	2	4	0	2	0	0	0	0	0	0	0	0	0
Logan	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
Lyon, except	2	1	0	2	0	5	3	0	3	3	0	0	0	0	0
Emporia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Marion	15	3	3	0	0	6	2	0	8	1	0	0	1	0	7
Marshall	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
McPherson	35	0	1	0	0	2	1	0	3	0	0	0	0	0	1
Meade	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Miami	2	8	2	2	0	0	0	0	0	1	0	0	0	0	0
Mitchell	1	0	0	0	0	0	2	0	0	0	0	0	0	0	0
Montgomery, except	8	4	8	1	0	1	0	0	1	0	1	0	0	0	1
Coffeyville	2	1	1	0	0	0	0	0	2	1	0	0	0	0	2
Independence	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Morris	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0
Morton	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
Nemaha	0	0	0	2	0	0	4	0	0	0	0	1	0	0	1
Neosho, except	6	2	0	1	0	0	2	0	0	1	0	0	0	0	6
Chanute	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ness	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Norton	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Osage	1	1	0	0	0	2	6	0	7	0	0	0	0	0	1
Osborne	0	0	1	0	0	0	0	0	0	5	1	0	0	0	0
Ottawa	0	0	1	1	0	1	1	0	0	0	0	0	0	0	0
Pawnee	0	1	1	0	0	1	11	0	0	0	1	0	0	0	0
Phillips	1	0	8	0	0	3	0	0	0	0	0	0	0	0	0
Pottawatomie	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Pratt	0	0	1	0	0	2	7	0	8	1	0	1	0	0	3
Rawlins	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0
Reno, except	0	0	9	0	0	1	0	0	0	0	0	0	0	0	0
Hutchinson	1	1	16	3	0	2	12	0	1	2	0	0	0	0	15
Republic	0	1	0	0	0	3	0	0	1	0	0	1	0	0	1
Rice	0	0	1	7	0	1	14	0	3	3	0	1	0	0	0
Riley, except	0	0	1	1	0	0	0	0	5	0	0	0	0	0	0
Manhattan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rooks	0	0	1	0	0	0	2	0	0	0	0	0	0	0	0
Rush	0	0	0	0	0	0	5	0	4	0	0	0	0	0	0
Russell	0	0	3	1	0	3	1	0	2	0	0	0	0	0	0
Saline, except	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0
Salina	0	1	1	4	0	1	1	0	2	0	0	0	0	0	0
Scott	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sedgwick, except*	1	1	0	0	0	3	0	0	0	0	0	0	0	0	0
Wichita	3	2	24	21	0	11	52	0	49	36	2	1	0	0	31
Seward	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0
Shawnee, except	6	0	4	0	0	2	0	0	0	1	1	1	0	0	3
Topeka	7	2	11	4	0	12	1	0	3	28	1	2	0	1	22
Sheridan	3	0	1	0	0	1	0	0	12	0	0	0	0	0	0
Sherman	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Smith	0	0	0	1	0	2	0	0	0	0	1	0	0	0	0
Stafford	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Stanton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stevens	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sumner, except	6	3	4	0	0	4	5	0	7	0	0	1	0	0	2
Wellington	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Thomas*	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Trego	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0
Wabaunsee	1	0	1	1	0	0	0	0	0	0	1	0	0	0	0
Wallace	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Washington	3	0	0	0	0	1	1	0	0	0	0	0	0	0	0
Wichita	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Wilson	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0
Woodson	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
Wyandotte, except,	0	0	1	0	0	0	0	0	0	3	0	0	0	0	1
Kansas City	16	5	16	6	0	8	15	1	12	8	2	2	0	0	55
Rosedale	0	0	0	0	0	0	0	0	0	0	0	0	0	0	175

* No report.

Other communicable diseases: Actinomycosis, 1; bacillary dysentery, 2; cancer, 20; chancroid, 7; continued fever, lasting seven days, 1; erysipelas, 3; gonorrhœa, 271; ophthalmia neonatorum, 1; pellagra, 3; syphilis, 290; septic sore throat, 1; tetanus, 1; trachoma, 1.

"Dr. Price's Cream Baking Powder."

The case of *The Royal Baking Powder Company, Complainant, v. S. J. Crumbine, Secretary of the Kansas State Board of Health, Defendant,* was recently decided in favor of Doctor Crumbine in the United States district court at Kansas City, Kan. This suit was brought in the spring of 1920 to enjoin Doctor Crumbine, the defendant, from causing prosecutions to be instituted by county attorneys in Kansas against the complainant, the Royal Baking Powder Company, on account of the use by that company upon cans of phosphate baking powder of labels which Doctor Crumbine maintained were false and deceptive. A restraining order was granted at the beginning of the suit against the defendant to enjoin him from causing such prosecutions to be begun against the complainant.

The bill in equity of the complainant alleged that it had been doing a large business in Kansas in the sale of baking powder; that it had sold a baking powder in that state containing cream of tartar, but no phosphate, in cans bearing the inscription, "Dr. Price's Cream Baking Powder"; and in the year 1919 had begun to sell a baking powder in that state which contained phosphate, but no cream of tartar, in cans bearing the inscription, "Dr. Price's 'Cream' Baking Powder," and that the defendant was threatening to cause prosecutions to be begun by county attorneys against the complainant on account of the sale of phosphate baking powder under the latter inscription. It was charged that for a long time, until about the year 1915, it had been the current opinion that phosphate, as an ingredient in baking powder, was injurious to health; but that further investigation had changed this opinion, and by the year 1919 it had become the accepted view that phosphate of good quality and properly manufactured and blended with other ingredients was not injurious to health, and that the complainant, arriving at that conclusion, had put upon the market a phosphate baking powder in Kansas under the latter inscription, and asserted it had a right to do so; that the words "Dr. Price's" merely designated the manufactory at which the baking powder was made and the quality of the baking powder, and the word "Cream" did not refer to any ingredient, but was an arbitrary word used as a trade-mark, and that these words were covered by trade-marks granted by the Federal government to the complainant; that the business of the complainant in Kansas was of great value and would be destroyed if the defendant was not restrained from his threatened action.

The defendant in his answer denied the allegations of the complainant and charged that the complainant had for many years advertised extensively that phosphate, as an ingredient in baking powder, was injurious to health and was objectionable as being made from bones; that the complainant in 1919 suddenly changed its position and had falsely advertised that there had been a great reduction in the price of Dr. Price's Cream Baking Powder, and had put upon the market a phosphate baking powder at one-half the price of its cream-of-tartar baking powder, but that it had not, as a matter of fact, reduced the price of the cream-of-tartar baking powder, but was merely selling the different phosphate baking powder at a lower price than the other; that the words, design, color of the label, and the words impressed upon the cans of the phosphate baking powder very closely resembled those shown upon the cans of the cream-of-tartar baking powder; that many housekeepers in Kansas had become accustomed to the use of the cream-of-tartar baking powder put out under the old label, and had been led to believe that it was a better baking powder than any which contained phosphate as an ingredient instead of cream of tartar; that many such housekeepers had been deceived by being sold, by retail dealers, the phosphate baking powder under the deceptive, imitative label and wording referred to.

The evidence was presented in the form of affidavits by each party, tending to support their respective contentions, and briefs were filed by the attorneys on each side.

The court followed the decision of the United States circuit court of appeals in the case, by the same complainant, against George W. Emerson, a prosecuting attorney in the state of Arkansas, and entered a decree dissolving the restraining order, permitting, pursuant to the agreement of the parties, only such phosphate baking powder under the objectionable labels as was in the possession, at the time of the decree, of Kansas retailers to be sold by them, and dismissing the suit at the cost of the complainant, with leave, however, to the complainant to refile the suit within one year from June 11, 1921, the date of the decree. The purpose of the latter clause was to give the complainant an opportunity to take further action in the contingency that the United States supreme court should reverse the decision of the court of appeals in the Emerson case.

Cockroaches.

Cockroaches are an unmitigated nuisance, as everyone knows who has been annoyed and tormented by these disgusting and even dangerous pests.

As a matter of fact, the cockroach is about as annoying to have in the home as is the elusive flea or the sly and lurking bedbug.

As all housewives who have had any experience with them know, cockroaches infest pantries, kitchens, closets, oven rooms of bakeries, and, in fact, almost every human habitation. They are night marauders, rarely visible in daytime, concealing themselves behind baseboards, cracks in floors, walls and other convenient hiding places, from which they swarm forth at night.

In addition to being an unmitigated household nuisance, cockroaches are dangerous as well as destructive. For besides the damage they do to foodstuffs, they pollute and render nauseating and dangerous everything in the way of human food with which they come in contact. Also every housewife is familiar with the sickening, fetid odor that is always noticeable where cockroaches are present.

Once a building becomes infested with cockroaches the entire building should be renovated. It is of little use to attempt destructive measures in any one apartment, for the reason that it only drives them to others in the same building, and sooner or later they will return.

One of the simplest and most effective ways of ridding premises of these pests is that of dusting their runways with commercial sodium fluorid mixed in equal parts with flour. Numerous tests with this agency have been made by the Bureau of Entomology of the United States Department of Agriculture in bakeries, lunch rooms, milk depots, etc., and always with satisfactory results.

A good way to apply the mixture of sodium fluorid and flour is to use a dust gun or powder blower, such as may be purchased at any drug store. Also the mixture should be thoroughly dusted over the shelves, tables and runways. The immediate effect will be noticed, that the insects will come out of their hiding places, and, after rushing about in a frantic manner for a time, become paralyzed and soon die. The dead or paralyzed cockroaches may then be swept up and burned. As a rule, premises can be ridden of roaches by this method in twenty-four to forty-eight hours. The government experts also tell us that the sodium fluorid acts as a contact insecticide and as a stomach poison. The same mixture will kill caterpillars that have been fed on foliage that has been dusted with it.

The foregoing directions and advice as to ridding premises of cockroaches were given in the *Bulletin* in its issue of August 2, 1919. But the requests for it have exhausted the issue and in order to supply the continued demands, it is reproduced.—*Bulletin Chicago School of Sanitary Instruction.*

Poison Ivy.

In one of the recent BULLETINS of one of the State Boards of Health there is an article relating to the treatment of poison ivy, which recommends fluid extract of grindelia, alkaline substances, etc. We would like to call attention to the investigation of Doctor Stevens, of Ann Arbor, on poison ivy, which was published in the *American Journal of Pharmacy*, 1907, page 499, in which it is clearly shown that the toxic substance of poison ivy is a very resistant resin and the best treatment for the same is a mechanical one, which is to dissolve off the resin, which is deposited upon the skin (in very microscopical invisible particles), by the mixture of ether and alcohol, being careful not to spread the poison by the use of this mechanical solvent. This solvent is applied with absorbent cotton, which, when used, is thrown away. Several applications are made to insure the removal of the resin, and then the surface dried with another piece of dry cotton, which is also thrown away. The process is repeated. After this treatment stearate of zinc may be applied, which allays irritation.

It is true this resistant resin, particularly in the fresh state, may be decomposed by some of the alkalies or metallic substances, but in every case when a remedy is applied it should be kept in mind that the poison is of a resinous character.

The Child Welfare Speakers' Bureau.

People in general, and the people of Kansas in particular, are very willing to take the right stand and take it vigorously if they have the facts before them and fully realize a situation.

The Kansas child-welfare program fell down in the legislature, chiefly because the program was not generally and sufficiently understood. This in turn was true because the clubs and communities had not been studying the needs of the children of their own communities or of the state at large as extensively as they should.

With few exceptions, every community which had made a child-welfare survey sent men to the legislature who were familiar with the issues of the Children's Code Commission and ready not only to indorse them, but work for them.

Many men said: "But this is all so new to me. I cannot grasp it all at once." In order to prevent a similar experience two years hence, the Children's Code Commission and the Kansas Women's Committee on Child Welfare have organized a speakers' bureau for the purpose of covering the state with child-welfare discussion. If people can be aroused to think they will act, and act rightly. These speakers have been selected because of their particular interests and fitness to speak on the subjects assigned. All are giving their services. In most instances expenses must be paid by the organization arranging for the speaker.

Every organization in the state should plan to use one or several of these speakers on their next year's programs. Arrangements may be made with the speakers personally, or with the secretary of the Children's Code Commission, Dr. Florence Brown Sherbon, Topeka.

Speakers' Bureau

Of the Kansas Children's Code Commission and the Kansas Women's Committee on Child Welfare.

Speakers who will accept a limited number of engagements in connection with their official work without expense to the community are marked with an asterisk (*). All others must have their expenses paid by the organization inviting them to speak.

Correspondence may be addressed directly to the speakers or to the Secretary of the Code Commission, Dr. Florence Brown Sherbon, Statehouse, Topeka.

Subject: The Kansas Child Research Bureau.

Speakers:

PROF. F. W. BLACKMAR, Lawrence, Dean of the Graduate School, K. U.

MRS. FRANK CHASE, 1121 Arch street, Topeka, Representative of A. C. A. on Kansas Women's Committee on Child Welfare; Chairman Drafting Committee on General Interests of Children, Children's Code Commission.

*PROF F. J. KELLEY, Lawrence, Dean of Administration, K. U.

*PROF. HELEN THOMPSON, Manhattan, Dean of Department of Home Economics, K. S. A. C.

*DR. FLORENCE BROWN SHERBON.

Subject: Educational and Industrial Interests of Kansas Children.

Speakers:

*MISS LORRAINE ELIZABETH WOOSTER, Topeka, Superintendent State Department of Public Instruction.
"The Rights of a Child."

*MISS ALICE K. MCFARLAND, Topeka, Factory Inspector, State Industrial Court.
"Child Labor in Kansas."

*MISS LINNA BRESETTE, Topeka, Supervisor Industrial Welfare, State Industrial Court.
"The Mother and the Mother-to-be in Industry."

MRS. GEORGE BARKER, Lawrence, Chairman Drafting Committee on Education, Children's Code Commission.
"Compulsory Education and Child Labor."

PROF. I. B. MORGAN, Library Building, Kansas City, Kan., Director Continuation Schools and Vocational Bureau.
"The Child and His Needs."

*MR. L. E. NOFSINGER, Manhattan, Teacher Training Agent, Trades and Industry, State Board of Vocational Education.
"Part-time Schools."

MRS. C. F. MILLER, Fort Scott, Chairman Committee on Social and Industrial Conditions, State Federation of Women's Clubs.
"The Woman Who Works."
"The Child Who Works."

T. J. SMART, Lawrence, Community Adviser, Extension Division, K. U.
"Making the School a Center of Community Interest."
"The Next Step in Rural School Organization."
"Attendance and Retardation as a Rural-school Problem."

PROF. W. W. SULLIVAN, Lawrence, Director Americanization Work, Extension Division, K. U.
"The Making of an American."

Subject: The Defective.

1. Mental Defective.

Speakers:

*PROF. J. C. DEVOSS, Emporia, Director Bureau of Educational Measurements, State Normal School; President State Association of Mental Hygiene.
"Picking Out the Mental Defective."

MRS. AUSTIN N. COWAN, 1229 Country Club Place, Wichita.
"The Laggard in Our Schools."

DR. KARL A. MENNINGER, Mulvane Building, Topeka.
"The Psychopathic Child."

PROF. W. S. HUNTER, Lawrence, Department of Psychology, K. U.
"Practical Application of Mental Measurements."

PROF. R. A. SCHWEGLER, Lawrence, Department of Educational Psychology, K. U.
"The Case of the Child Who is Born Short."

MRS. DARLENE NEWBY, Topeka.
"The Mental Status of Court Children."

DR. HARRY LINDSEY, Assistant Superintendent State Hospital for Insane, Topeka.
"Stop the Source."

2. The Delinquent.

MRS. J. R. WILKIE, Emporia, Chairman Drafting Committee on Protection of Adolescence, Children's Code Commission.
"The Delinquent Child."

*Etta Joe McCoy, Superintendent State Industrial School for Girls, Beloit.
"The Delinquent Girl."

*Capt. W. P. MacLean, Superintendent State Industrial School for Boys, Topeka.
"The Delinquent Boy."

Mr. Albert S. Bigelow, Superintendent State Reformatory, Hutchinson.
"Delinquent Youth."

*Mrs. Julia Perry, Superintendent Industrial Farm for Women, Lansing.
"The Delinquent Woman."

J. K. Codding, Lansing, Ex-warden, State Prison.
"The Delinquent Man."

3. The Physically Defective.

*Rev. Thomas E. Chandler, Superintendent State School for the Blind, Kansas City, Kan.
"Conservation of Vision as a Problem of State."

*Mr. Elwood A. Stephenson, Superintendent State School for the Deaf, Olathe.
"The Problem of the Deaf."

*Dr. C. B. Francisco, Department of Orthopedics, University Hospital, Rosedale.
"Saving the Crippled Child."

Dr. O. D. Walker, Salina.
"Physical Defects and Their Relation to Moral Obliquity and Mental Stupidity."

Subject: Dependent Children and Institutional Children.

Speakers:

*Miss Amy Jane Leazenby, Manhattan, Assistant Professor of Household Economics, K. S. A. C.
"Child Wards of the State."

Mrs. M. C. Campbell, 1313 North Emporia Avenue, Wichita.
"Baby Camps."

*Mr. D. F. Shirk, 1001 Harrison Street, Topeka, Superintendent Kansas Children's Home Society.
"Dependent Children."
"The Child Born Out of Wedlock."
"Children's Legislation."

*Mrs. Mary McFarlane, Manhattan, Rural Extension, Home Economics, K. S. A. C.
"The Institutional Child."

*Dr. Florence Brown Sherbon, Chief, Division of Child Hygiene, Statehouse, Topeka.
"The Homeless Child and the Childless Home."
"The Institutional Child."

Mrs. J. E. Raymond, Girard.
"The Homeless Child."

Miss Ora L. Webb, Lawrence, Department of Home Economics, K. U.
"Study of the Dietaries in Children's Orphanages."

Subject: Rural Child Welfare.

Speakers:

Mrs. Cora Wellhouse Bullard, Tonganoxie, President Native Sons and Daughters Association.
"Rural Child Welfare."

Mrs. J. E. Raymond, Girard, Commissioner Scholarship Loan Fund, K. F. W.C.
"The Rural Child in Kansas."

Dr. J. J. Entz, Marion, County Health Officer Marion County.
"The Health of the Rural School Child."

Mrs. Virginia Knox Kimble Entz, R. N., Marion.
"Rural Health."

Mrs. Mac C. Patrick, Santa Fe.
"Social and Educational Interests of the Rural Child."

Subject: Welfare of Colored Children.

Speakers:

Prof. G. R. Bridgeforth, President Colored Industrial Institute, Topeka.
"Social and Educational Interests of Colored Children."
"The Health of the Colored Child."

Miss Anna May McGruder, R. N., Colored Industrial Institute, Topeka.
"Home Health and Home Nursing."

Mrs. Emma Gaines, 1182 Buchanan Street, Topeka, Representative State Federation of Colored Women's Clubs.
"The Welfare of the Colored Child."
"Preparation for Motherhood."
"Child Care and Child Training."

Subject: "Girls" and "Boys."

Speakers:

*Mrs. Mary Pierce Van Zile, Dean of Women, K. S. A. C., Manhattan.
"Training for Motherhood."

Prof. Elizabeth Sprague, Lawrence, Director Department of Home Economics, Kansas University.
"The Woman Citizen."

Mrs. Hattie Moore Mitchell, Pittsburg, Dean of Women, State Manual Training Normal School.
"Just Girls."

Prof. LoRee Cave, Hays, Director, Department of Home Economics, State Normal School.
"The High-school Girl."

Prof. Alberta Corbin, Lawrence, Dean of Women, K. U.
"College Training and Citizenship."

Dr. Frederick C. Lewis, Emporia, President College of Emporia.
"Fathers and Sons."

Rev. J. H. Fazel, 1520 Mulvane Street, Topeka, Boy Scout Leader.
"The Boy Scout Movement."

Miss Jessie Cline, Lawrence, Department of Home Economics, K. U.
"Correct Clothing for the High-school Girl."

Mrs. Mary Williams Wells ("Miss Libby"), Stockton.
"Who is My Daughter's Keeper?"

Subject: Eugenics.

Speakers:

Dr. Elvenor Ernest, 729 Kansas Avenue, Topeka.
"Fitter Families for Future Firesides."

Prof. O. P. Dillinger, Pittsburg, Department of Biology, State Manual Training Normal School.
"The Human Thoroughbred."

MRS. MARY T. WATTS, Audubon, Iowa, care State Board of Health, Topeka.
"The Big Business of Raising Better Babies."
"Family, State and Nation."

RT. REV. JAMES WISE, Bishop of Episcopal Diocese of Kansas, Topeka.
"Fathers of Men."

Subject: Health of Children.

Speakers:

DR. JAMES NAISMITH, Lawrence, Department of Physical Education, K. U.
"Physical Education and the State."

DR. MARTHA BACON, Lawrence, Department of Physical Education, K. U.
"The Physical Development of the Girl."
"What Women Stand Upon—Their Feet!"

MISS EDNA MCCULLOUGH, Emporia, Department of Physical Education, Kansas State Normal.
"Unbending the Twig."

*DR. S. J. CRUMBINE, Secretary, State Board of Health, Topeka.
"The Health of the Community."
"One Thousand Cases of Tuberculosis in Kansas—An Analysis."

*DR. S. T. COX, Medical Examiner, State Tuberculosis Association, Topeka.
"The Insidious Foe."

*DR. C. S. KENNEY, Superintendent, State Sanatorium for Tuberculosis, Norton.
"The Pretubercular Child."
"The State and Tuberculosis."
"The Schools and Tuberculosis."
(Doctor Kenney will also conduct diagnostic clinics when so desired.)

MRS. VIRGINIA KNOX KIMBLE ENTZ, R. N., Marion.
"The Health of the Worker."
"The Health of the Preschool Child."

*DR. FLORENCE BROWN SHERBON, Chief, Division of Child Hygiene, Topeka.
"The Protection of Maternity and Infancy."

DR. EARLE G. BROWN, City Health Officer, Topeka.
"Community Health Service."

*DR. C. H. LERRIGO, Chief, Division of Vital Statistics, Statehouse, Topeka.
"Recent Vital Statistics of Kansas."
"The Movement of Population."
"The Big Family Bible."

DR. L. B. GLOYNE, City Health Officer, Kansas City, Kan.
"Community Health."
"The Health of the School Child."

DR. J. C. MONTGOMERY, Assistant Surgeon, U. S. Public Health Service, Columbus.
"Paving the Way."
"The People's Health."
"Past, Present, and Future."
"Physical Examination of School Children."

MRS. WALTER BURR, Division of Venereal Disease, State Board of Health, Topeka.
"Building a Citizen."
"Mother-Citizen."

*MISS EDNA BURCH, Division of Child Hygiene, State Board of Health, Topeka.
"Teaching Health Through Exhibits."

*DR. A. J. WARREN, Chief, Division of Epidemiology, State Board of Health, Topeka.
"Rural Sanitation."
"The County as a Health Unit."
"Modern Aspects of Prevention and Treatment of Contagious Diseases."

MRS. AUSTIN N. COWAN, 1229 Country Club Place, Wichita.
"Maternity Centers."

MRS. JAMES E. ROUSE, Hays, formerly teacher in Department of Home Economics, Hays Normal.
"Food for Children."

*DR. HELEN B. THOMPSON, Manhattan, Dean, Division of Home Economics, K. S. A. C.
"Growth as a Measure of Nutritional Needs in Childhood."
"Food in Relation to Growth and Development of Children."
"Feeding the Subnormal Child."

*MISS AMY JANE LEAZENBY, Manhattan, Assistant Professor of Household Economics, K. S. A. C.
"Safeguarding the Lives of Mothers and Babies."

*DR. L. JEAN BOGERT, Manhattan, Professor of Food Economics and Nutrition, K. S. A. C.
"Malnutrition Among Children: Its Causes and Cure."
"Newer Knowledge of the Nutrition of Children."
"Growth and Its Relation to Diet."

*MISS MARTHA S. PITTMAN, Manhattan, Associate Professor of Food Economics and Nutrition, K. S. A. C.
"Special Cookery for Children."
"Training Children in Correct Food Habits."

PROF. C. I. REED, Lawrence, Professor of Physiology and Hygiene, K. U.
"Personal Hygiene."
"School Hygiene."
"Industrial Hygiene."

MISS VIOLA J. ANDERSON, Lawrence, Department of Home Economics, K. U.
"Making Nutrition Work Yield Practical Results."
"The Ups and Downs of Food Costs."

MISS JESSIE CLINE, Lawrence, Department of Home Economics, K. U.
"The Relation of Play to Health."
"The Home Medicine Cabinet."

MISS LAURA NEISWANGER, P. H. N., Osborne.
"Health Education of the Public."
"The Public Health Nurse."

MISS PEARL MARTIN, Nursing Specialist, Extension Division, K. S. A. C., Manhattan.
"An Equal Chance for Equal Health."
"Bed Making and Baths."
"Causes and Prevention of Disease."
"Equipment and Care of the Sick Room."
"Infant Care."
"The Medicine Closet and Its Contents."
"Special Points in the Care of the Sick."

DR. W. J. WALKER, New England Building, Topeka.
"The Health Era."

DR. O. D. WALKER, Salina.
"School Boards and the Health of School Children."
"The Nervous System of the Growing Child."

DR. J. T. AXTELL, Newton.
"What to Do Until the Doctor Comes."
"The Newer Knowledge of Child Growth and Development."
"Protection of Maternity."

*Dr. B. K. Kilbourne, Topeka, Chief, Division of Venereal Disease, State Board of Health.
"Social Hygiene."
"Venereal-disease Control in Kansas."

This Division also loans the following films:
"Fit to Fight" and Animated Diagram.—Venereal Disease. (Sent out only with speaker from the Board of Health.)
"How Life Begins."—Sex Education.
"Women's Lecture Film."—Sex Education.
"Men's Lecture Film."—Sex Education.

State Board of Health, Topeka—Educational Films:
"An Error of Omission."—Birth Registration.
"The Awakening of John Bond."—Tuberculosis.
"The Price of Human Lives."—Tuberculosis.
"The Long versus the Short Haul."—Milk.
"The Fly."
"The Rat Menace."
"Our Children."
"An Equal Chance for Equal Health."—Public Health Nursing.

Subject: Social and Legislative Protection of Children.

Speakers:

Mrs. Homer Foltz, 1200 Kansas Avenue, Topeka, Women's Bar Association.
"Children's Codes."

J. K. Codding, Lansing, Ex-warden, State Prison.
"County Welfare Boards."

L. A. Halbert, National Public Welfare League, Manhattan Building, Kansas City, Mo.
"County Welfare Boards."

Mrs. Festus Foster, 1708 West Fifteenth Street, Topeka, Chairman Subcommittee on Child Welfare, State Federation Women's Clubs; Chairman Kansas Women's Committee on Child Welfare.
"Women in Politics."

Mrs. Beatrice Clapp, State Fish Hatcheries, Pratt, Representative State P. E. O. on Kansas Women's Committee on Child Welfare.
"The Future of the Kansas Child."

Mrs. H. O. Garvey, 515 Buchanan Street, Topeka.
"Child Study and Play."
"The Day of the Child."

Mrs. Matie Toothaker Kimball, Manhattan.
"Women's Clubs and the Newspaper."
"Women's Clubs and the Call of 1921."

Mrs. Magdalen Munson, Pittsburg.
"Legislative Protection of Children."

Mrs. D. V. Walker, 1537 North Topeka Avenue, Wichita, Chairman Drafting Committee on Protection of Maternity, Children's Code Commission; Representative State D. A. R. on Kansas Women's Committee on Child Welfare.
"Patriotism and Paternity."
"Nobody's Child."
"Women's Contribution to Politics."

Mrs. Walter Burr, Manhattan, Director, Riley County Child Welfare Survey.
"The Child Welfare Survey."

MRS. MAMIE AXLINE FAY, Pratt.
"The Big Seventh and Child Welfare."

REV. S. S. ESTEY, Pastor First Presbyterian Church, Topeka.
"Habit."

JUDGE RALPH GAW, County Courthouse, Topeka.
"Marriage Regulation."
"Children Before the Courts."

MRS. J. K. CODDING, Lansing, President Kansas Branch of National Mothers' Congress and Parent-Teachers' Association.
"The Legislative Session of 1921: An Analysis."
"Come, Let Us Reason Together."

MRS. LILLIAN MITCHNER, Hutchinson, Representative State W. C. T. U. on Kansas Women's Committee on Child Welfare.
"The Child in the Midst."
"Women and the Legislature."
"Public Morals and the Child."

*MISS HILDEGARDE KNEELAND, Manhattan, Professor of Household Economics, K. S. A. C.
"What We Can Do for the Children of Kansas."
"The Protection of Maternity and Infancy."

*MISS AMY JANE LEAZENBY, Manhattan, Assistant Professor of Household Economics, K. S. A. C.
"A Program of Child Welfare for Kansas."

PROF. ELIZABETH SPRAGUE, Lawrence, Director, Department of Home Economics, Kansas University.
"The Profession of Home Making."
"Financing the Family."

MISS ELIZABETH MCGUIRE, Lawrence, Department of Home Economics, K. U.
"Art in the Home."
"The Economy of Dress."
"Planning the Small House."

MRS. C. F. MILLER, Fort Scott, Chairman, Department of Social and Industrial Conditions, State Federation of Women's Clubs.
"The Club Woman and Child Welfare."

REV. WILBUR N. MASON, Pittsburg, Pastor, First M. E. Church.
"Marriage and the State."

HON. E. D. MCKEEVER, Topeka.
"Courts of Domestic Relations."

DR. ELVENOR ERNEST, 729 Kansas Avenue, Topeka.
"Women and Marriage."

A. A. HYDE, Mentholatum Company, Wichita.
"A Man's View of Women's Part in Politics."

MRS. ELVINA DAWLEY REED, P. H. N., Hays.
"Little Mother's Leagues: An Education for Motherhood."
"Americanization."

MRS. COOPER KING, 803 Nims Avenue, Wichita.
"Children as We Mold Them."

MRS. PAUL HART, 211 East Thirteenth Street, Wichita, Representative State League of Women Voters on Kansas Women's Committee on Child Welfare.
"Perfect Ladies and Legislation."
"The Child-welfare Survey."

HON. MINNIE GRINSTEAD, Liberal, Representative Legislative Sessions of 1919 and 1921.
"Women, Shoulder Your Load!"

RT. REV. A. J. KUHLMAN, S. J., St. Marys.
Subject to be selected.

MRS. REBECCA WELLS TAYLOR, Lyons, Past President State Federation Women's Clubs.
Subject to be selected.

Subject: Addresses to Young People.

Speakers:

*PROF. P. P. BRAINARD, Manhattan, K. S. A. C.
"Education and the New Day."
"Commencing in Kansas."

*DEAN F. D. FARRELL, Manhattan, K. S. A. C.
"Special Obligations and Opportunities of the Educated Under Popular Governments."

*PROF. GEORGE GEMMELL, Manhattan, K. S. A. C.
"The Other Fellow."

*DR. A. A. HOLTZ, Manhattan, Men's Adviser, K. S. A. C.
"America's Challenge to Youth."
"America's Greatest Need."

*PROF. V. L. STRICKLAND, Manhattan, K. S. A. C.
"The Leaven of Accomplishment."

*PROF. C. V. WILLIAMS, Manhattan, K. S. A. C.
"Education and Life."

*PROF. W. H. ANDREWS, Manhattan, K. S. A. C.
"A Golden Age in History."
"A New Mind for the New Time."

Tuberculosis kills producers—chiefly men and women between the ages 15 and 45.

A Matter of Diction.

A well-known author was caught by his wife kissing the parlor maid.

"I am surprised," said his wife.

"My dear," replied the author, "how often must I tell you not to maltreat the English language? It is I who am surprised. You are merely astonished."—*Pickup.*

Dangers of Intellect.

A worried mother living in the East Side of New York wrote to her boy's teacher as follows:

"Please do not push Tommy too hard, for so much of his brains is intelleck that he ought to be held back a good deal or he will run to intelleck entirely, and I do not desire it. So please hold him back so as to keep his intelleck from getting bigger than his body and injuring him for life."—*Life.*

IN VICTUS.

William H. Henley, who wrote the following poem, was in bed twenty-eight years.

Out of the night that covers me,
Black as the pit from pole to pole,
I thank whatever gods may be
For my unconquerable soul.

In the fell clutch of circumstance
I have not winced or cried aloud;
Under the bludgeoning of chance,
My head is bloody, but unbowed.

Beyond this place of wrath and tears
Looms but the horror of the shade,
And yet the menace of the years
Finds, and shall find me, unafraid.

It matters not how straight the gate,
How charged with punishments the scroll.
I am the master of my fate;
I am the captain of my soul.

—*Mississippi Bulletin.*

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OF THE
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S. J. CRUMBINE, M. D., Editor.

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For country and health.

If in doubt ask the health officer!

Have you recovered from your vacation?

Have you been vaccinated against typhoid fever?

There is no substitute for milk in the diet of a child.

Have your child physically examined before it starts to school. It pays!

The insanitary outside toilet is the community's greatest potential danger.

Faulty habits of living and insanitary surroundings are the advance agents of disease.

The following counties have adopted the full-time health officer plan: Butler, Cherokee, Ellis, Ford, Geary and Marion.

Tuberculosis continues to be spread by the careless spitter and the thoughtless or ignorant parent or patient who fondles children.

MORBIDITY REPORT FOR JULY, 1921.

COUNTIES AND CITIES.	Tuberculosis	Typhoid and Paratyphoid	Smallpox	Diphtheria	Influenza	Scarlet Fever	Measles (morbilli)	German Measles (rubella)	Whooping Cough	Chickenpox	Mumps	Pneumonia (all forms)	Meningitis (epidemic)	Poliomyelitis (epidemic)	Other diseases (see Addenda)
THE STATE	230	188	88	184	2	171	56	4	195	20	14	14	5	6	440
Allen, except	1	4	1	4	0	0	0	0	0	0	0	0	1	0	0
Iola	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Anderson	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Atchison, except	1	3	0	1	0	0	0	0	0	0	0	0	0	0	0
Atchison city	3	3	0	7	0	1	0	0	8	0	0	0	0	0	0
Barber	0	1	1	0	0	2	0	0	0	0	0	0	0	0	1
Barton, except	0	1	2	1	0	2	6	0	5	1	0	1	0	0	0
Great Bend	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bourbon, except	0	2	4	1	0	1	0	0	0	0	0	0	0	0	0
Fort Scott	4	0	0	2	0	0	0	0	0	0	1	0	0	0	14
Brown	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Butler, except	3	20	2	15	0	6	1	0	3	1	0	0	0	0	14
Augusta	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
El Dorado	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Chautauqua*	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cherokee, except	2	6	0	0	0	0	0	0	2	0	0	0	0	0	9
Galena	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cheyenne	0	0	1	0	0	1	0	0	0	2	0	0	0	0	0
Clark	0	1	0	0	0	0	0	0	0	0	0	0	1	0	1
Clay	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Cloud, except	1	1	0	2	0	1	2	0	0	0	0	0	1	0	5
Concordia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coffey	2	1	3	0	0	1	0	0	0	0	0	0	0	0	0
Comanche	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Cowley, except	11	6	1	9	0	4	4	0	2	0	0	1	0	0	7
Arkansas City	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Winfield	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crawford, except	1	3	2	1	0	0	2	0	0	0	0	0	0	0	2
Pittsburg	4	3	0	0	0	3	0	0	0	0	0	1	0	0	4
Decatur	1	0	5	0	0	0	0	0	0	0	0	0	0	0	0
Dickinson	1	1	0	1	0	3	0	0	0	0	0	0	1	0	0
Doniphan	4	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Douglas, except	4	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Lawrence	6	1	0	0	0	0	2	0	3	0	2	0	0	0	6
Edwards	1	0	0	0	0	2	0	0	0	0	0	0	0	0	0
Elk	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Ellis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Ellsworth	0	1	2	0	0	0	3	0	0	2	0	0	0	0	1
Finney	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Ford, except	3	5	0	2	1	2	1	0	0	0	0	0	0	0	0
Dodge City	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Franklin, except	7	0	0	2	0	2	1	0	0	0	0	0	0	0	0
Ottawa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Geary, except	1	0	0	0	0	4	0	0	25	2	0	0	0	0	2
Junction City	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gove	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Graham	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0
Grant	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gray	0	0	3	0	0	0	0	0	0	0	0	0	0	0	1
Greeley*	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Greenwood	0	2	0	1	0	7	0	0	0	0	0	0	0	0	1
Hamilton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Harper	0	2	0	2	0	0	0	0	5	0	0	0	0	0	2
Harvey, except	0	3	0	2	0	0	0	0	3	0	0	0	0	1	0
Newton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Haskell	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hodgeman	0	0	0	6	0	1	0	0	0	0	0	0	0	0	0
Jackson	1	0	0	1	0	0	0	0	0	0	0	0	0	0	2
Jefferson	1	0	7	0	0	5	0	0	1	0	0	0	0	0	0
Jewell	0	1	2	0	0	0	3	1	0	0	0	0	0	0	0
Johnson	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Kearny	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Kingman	0	0	0	0	0	3	0	0	1	0	0	0	0	0	1
Kiowa	0	1	0	0	0	8	1	0	2	0	0	1	0	0	1
Labette, except	0	9	0	1	0	1	0	0	0	0	0	0	0	0	9
Parsons	0	2	1	1	0	0	0	0	0	0	0	0	0	0	15
Lane	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Leavenworth, except	1	0	1	2	0	0	0	0	0	0	0	0	0	0	1
Leavenworth city,	0	0	0	9	0	2	0	0	0	0	1	0	0	0	7

MORBIDITY REPORT FOR JULY, 1921—Concluded.

COUNTIES AND CITIES.	Tuberculosis	Typhoid and Paratyphoid	Smallpox	Diphtheria	Influenza	Scarlet Fever	Measles (morbilli)	German Measles (rubella)	Whooping Cough	Chickenpox	Mumps	Pneumonia (all forms)	Meningitis (epidemic)	Poliomyelitis (epidemic)	Other diseases (see Addenda)
Lincoln	2	3	5	0	0	0	0	0	4	0	0	0	0	0	0
Linn	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0
Logan	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Lyon, except	3	5	0	1	0	1	0	0	0	0	0	0	0	0	0
Emporia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Marion	4	2	0	0	0	0	0	0	3	0	0	0	0	0	5
Marshall	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2
McPherson	3	1	0	0	0	0	0	0	1	0	0	0	0	0	1
Meade	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Miami	3	5	0	0	0	1	0	0	0	0	0	1	0	0	0
Mitchell	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0
Montgomery, except	25	6	1	4	0	0	0	0	5	1	0	0	0	0	1
Coffeyville	2	4	0	5	0	5	0	1	1	0	0	0	0	0	5
Independence	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Morris	3	1	0	0	0	7	0	0	2	0	0	0	0	0	0
Morton	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0
Nemaha	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Neosho, except	9	4	0	4	0	0	0	1	0	0	0	0	0	0	1
Chanute	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ness	0	2	2	1	0	0	0	0	0	0	0	0	0	0	1
Norton	4	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Osage	2	0	0	0	0	4	0	0	0	0	0	0	0	0	0
Osborne	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Ottawa	0	0	0	0	0	0	0	0	12	0	0	0	0	0	0
Pawnee	0	0	0	0	0	0	1	0	0	0	1	0	0	0	1
Phillips	1	0	2	0	0	6	0	0	0	0	0	0	0	0	0
Pottawatomie	0	0	0	0	0	7	0	0	2	0	0	0	0	0	0
Pratt	0	0	0	0	0	3	2	0	1	0	0	0	0	0	1
Rawlins	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0
Reno, except	1	3	0	1	0	1	0	0	0	0	0	0	1	0	0
Hutchinson	1	3	3	4	0	2	2	0	0	2	0	0	0	0	7
Republic	0	1	0	0	0	1	0	0	0	0	0	1	0	0	1
Rice	1	0	3	0	0	0	4	0	5	0	1	0	0	0	1
Riley, except	1	4	0	0	0	5	0	0	0	0	0	1	0	0	2
Manhattan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rooks	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0
Rush	0	0	9	0	0	0	12	0	9	0	0	1	0	0	0
Russell	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0
Saline, except	0	0	0	0	0	0	0	0	2	0	0	0	0	1	0
Salina	1	3	0	1	0	0	1	0	5	0	0	0	0	0	2
Scott	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Sedgwick, except	0	2	0	1	0	1	1	0	2	0	0	1	0	0	0
Wichita	7	25	5	†70	0	13	4	0	29	2	3	1	0	1	107
Seward	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Shawnee, except	2	3	2	1	0	4	0	0	0	0	0	0	0	0	4
Topeka	22	1	3	7	0	6	0	1	17	2	0	2	0	0	33
Sheridan	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Sherman	1	0	2	0	0	2	0	0	0	0	1	0	0	0	0
Smith	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0
Stafford	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Stanton	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0
Stevens	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sumner, except	23	8	2	0	0	15	0	0	14	0	1	1	0	3	6
Wellington	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Thomas*	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Trego	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Wabaunsee	3	0	0	1	0	0	0	0	2	1	2	0	0	0	0
Wallace*	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Washington	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
Wichita	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Wilson	2	1	0	0	0	0	0	0	3	0	0	0	0	0	0
Woodson	1	2	0	1	0	3	0	0	1	0	0	0	0	0	0
Wyandotte, except,	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Kansas City	31	5	3	6	0	4	1	0	10	0	1	1	0	0	59
Rosedale	0	0	0	0	0	0	0	0	0	0	0	0	0	0	88

* No report.

† Forty-nine carriers.

ADDENDA.—Other communicable diseases: Cancer, 19; chancroid, 13; diarrhœa and enteritis, under 1 year, 2; dysentery (bacillary), 1; erysipelas, 2; gonorrhœa, 287; malaria, 2; ophthalmia neonatorum, 2; pellagra, 2; septic sore throat, 1; syphilis, 105; tetanus, 1; trachoma, 3.

The Efficacy of Vaccination.

William M. Welsh, M. D., Diagnostician and Consultant, Division of Medical Inspection, Department of Public Health, Philadelphia, Pa.

There are some facts that cannot be repeated too often, and this is particularly true of those which relate to the efficacy of vaccination against smallpox. I propose, therefore, to present a few of the more concrete facts which I have heretofore published, all of which have come under my personal observation at the Philadelphia Hospital for Contagious Diseases.

In every epidemic of smallpox that has occurred in Philadelphia within the past fifty years the protective power of vaccination has not only been clearly in evidence, but, furthermore, the degree of protection has been found to bear a very decided relation to the character of the vaccination scars. That is to say, the patients who exhibited typical scars have enjoyed, as a rule, a higher degree of protection than those with indifferent scars. Of course, it is assumed that the varying types of vaccination marks indicate a more or less perfect evolution of the vaccine process. While Jenner never said very much about the character of the scars, he nevertheless constantly insisted that the vaccinal process should observe a certain definite course in order that the protection should be perfect, and it is in such cases that the best scars are seen.

PROTECTION AGAINST SMALLPOX IS POSITIVE.

While hospital statistics furnish strong evidence of the protective power of vaccination, there is stronger and more convincing evidence seen in a smallpox hospital that has no place in statistical records. It is a matter of common experience that the physicians, nurses, and most of the patients themselves, become fully convinced of its protective power long before they know anything about the figures that express the mortality rates of the vaccinated and unvaccinated patients. The much larger proportion of deaths among the latter, the greater amount of suffering experienced by them, the more tedious and critical convalescence when the acute stage is survived, and the more terrible physical deformities that follow, are facts too evident to pass unnoticed by even an inexperienced observer. All this, together with the perfect protection enjoyed by the physicians, nurses and other attendants in the hospital, constitute proof of the prophylactic power of vaccination so absolute and positive that it is simply incontrovertible.

Perhaps the strongest evidence of prophylactic power of vaccination is found in persons recently and properly vaccinated. Referring to the statistics of the Philadelphia Hospital for Contagious Diseases, we find that in a record of over 10,000 cases of smallpox there were only two cases in vaccinated children under one year of age, while the unvaccinated cases at this age-period were 134. The mortality among the latter amounted to 64.18 per cent. Both of the vaccinated children recovered. Indeed, with them the disease was so indistinctly marked that the diagnosis of "varioloid" was questionable.

INCIDENCE OF SMALLPOX AMONG UNVACCINATED.

Furthermore, the records of the hospital show that no properly vaccinated child under seven years of age has died of smallpox since the malignant epidemic of 1871-'72. Even at that time there occurred but one death at this period of life among those who had been properly vaccinated, and there was a good excuse for that death. In this case the child was about one year old, a foundling from the almshouse, poorly nourished, with disordered digestion, and was very feeble. The eruption consisted of only a few small vesicles. Death resulted from sheer debility. On the other hand, the records show for the same period of time the admission of 810 unvaccinated children under seven years of age, with a death rate of 45.18 per cent. What a contrast is here seen between the vaccinated and unvaccinated cases at this period of life!

During the virulent epidemic of 1901-'04, 5,014 cases of smallpox occurred in Philadelphia, and of this number 4,074 were received at the hospital. *Among these there was none that had been recently successfully vaccinated.*

In order to provide accommodations for the unusually large number of smallpox cases already on hand, and which was rapidly increasing, it was necessary to erect additional buildings as well as enlarge those already in use. On this work from fifty to sixty men were employed, and as they were required to come constantly into close proximity to the patients, they were all requested to come to the administration building and get vaccinated. This request was complied with by all except two, and these two—and only these two—took smallpox.

During this epidemic more than two hundred persons, including physicians, nurses, ward maids, cooks, laundresses and the like were employed in the smallpox department, and not one contracted the disease. They were all immunized by vaccination.

DATA BASED ON FIFTY YEARS OF PERSONAL EXPERIENCE.

During the fifty years of my service it has not been the custom to select for service in the hospital persons who have previously had smallpox, but rather to see that every one assigned to duty has been recently successfully vaccinated or revaccinated; with strict observance of this rule, I am able to say that no physician, nurse or other employee has fallen ill with smallpox; and the number thus employed, together with the medical students who have visited the wards of the hospital for clinical instruction, must closely approximate 2,000. I should state that there was one medical student who was an antivaccinationist and refused to be vaccinated; he took the disease, and recovered after a very severe illness.

How different is the experience of the hospital attendants with regard to other contagious diseases against which there is no protection. While they can be immunized against smallpox, they not infrequently contract the other communicable diseases treated in the hospital.

Much convincing evidence of the protection afforded by vaccination against smallpox never appears in morbidity or mortality statistics. Every physician who is familiar with the disease, particularly those who work in smallpox hospitals, could cite numerous instances of such protection. Jenner and other early vaccinators established positive proof of the virtue of vaccination by showing that smallpox could not be given to an individual recently successfully vaccinated, neither by exposure to the contagion nor by direct inoculation with variolous matter.

Smallpox is one of the most highly contagious of all diseases, and practically every human being is susceptible to it. Scores of instances of protection granted to persons by vaccination performed after admission to the smallpox hospital upon mistaken diagnoses could, if necessary, be cited.

In every epidemic of smallpox since my connection with the hospital many instances have been observed of whole families removed to the hospital because of an outbreak of the disease in these families. In such instances the unvaccinated children have suffered and even perished, whilst those who were vaccinated remained perfectly exempt, although living, eating and sleeping in the infected atmosphere for several weeks. But I have yet to see an unvaccinated child escape the disease under similar conditions of exposure.

I have more than once seen a vaccinated infant take its daily supply of nourishment from the breast of its mother who was suffering from varioloid, and the infant continue as free from smallpox as if the disease were not present and the food derived from the most wholesome source. Surely, more conclusive proof should not be required to convince any one with an open mind of the efficacy of vaccination.

Furthermore, I have seen in the hospital several instances in which pregnant women, while suffering from smallpox, gave birth to children; and I have succeeded in protecting such infants from the disease by vaccination performed immediately after birth.

EXPERIENCE BEST TEACHER.

It is difficult how any one with a mind open to facts could question the prophylactic power of vaccination. As I have said elsewhere, if human experience counts for naught, upon what are we to rely? I have been connected with the Philadelphia Hospital for Contagious Diseases for fifty years, and have observed many more than 10,000 cases of smallpox. If there is one important fact the truth of which has convinced me more than any other, it is the protective influence of vaccination against smallpox. In the light of my years of personal observation, I cannot conceive of the converse of this proposition. To do so would be to challenge the judgment of my senses and of my perceptive faculties.—*Bulletin of Public Health, Philadelphia.*

Facts About Rabies.

Rabies is an acute infectious disease of warm-blooded animals, caused by a specific filterable virus. It is communicated to man by the saliva of an infected animal, either by coming in contact with a broken surface or, more usually, through a bite. The average incubation period is between twenty to sixty days in man, but occasionally longer. It is assumed that the infective organism travels along the nerve trunks. The shorter the route to the brain to be transversed, the shorter will be the incubation period.

Laboratory experiments have shown that a bite of apparently healthy animals rarely causes hydrophobia. Such animals, if kept under observation for about three weeks without developing symptoms, may be pronounced free from suspicion.

In animals the symptoms may be divided into three stages:

1. The prodromal or melancholic stage.
2. The excited or convulsive stage.
3. The paralytic stage.

When the second stage predominates the disease is known as the furious or convulsive rabies. If the excited stage is very short or lacking, paralysis starts early. It is then called dumb or paralytic rabies.

The furious rabies is characterized by a change of behavior, biting, restlessness, increased aggressiveness, loss of desire to take food, paroxysms of fury, peculiar howling barks, rapid loss of weight, paralysis beginning with the hind legs, death within three to six days after beginning of the disease. A rabid animal lives no longer than about ten days.

Any animal which shows clinical symptoms suspicious of rabies should be killed at once and the brain sent to a laboratory for diagnosis. The microscopic evidence of rabies appears a little earlier than the clinical symptoms. A diagnosis cannot always be made in the early stages. Animals should not be killed too soon, but kept under observation to insure a satisfactory laboratory examination. When immediate evidence is lacking in the brain, a part of it must be injected into test animals. Such tests require at least two weeks.

In the preparation of a head to be shipped to the laboratory, it should be carefully packed in ice and sawdust to prevent decomposition, and forwarded by the most direct and expeditious route. This laboratory will make its diagnosis by the smear method and will report as follows:

1. Negri bodies demonstrated—diagnosis, rabies.
2. Negri bodies and suspicious bodies not demonstrated in fresh brains —not rabies.
3. Negri bodies not demonstrated in decomposing brains—uncertain.
4. Suspicious bodies in fresh brains—probably rabies.

ANTIRABIC TREATMENT SHOULD BE GIVEN:

1. To persons bitten by animals which have proven rabid, either by clinical symptoms or by microscopic examination of the brains.
2. To persons whose hands or face have been contaminated with saliva of a rabid animal without being bitten. This is because of the possible presence of cracks, hang-nails or other small open wounds.
3. To persons bitten by stray dogs which cannot be located. The treatment is given as a precautionary measure.
4. To persons bitten, pending the laboratory diagnosis on the brain of the biting animal, provided that the symptoms or actions of the animal were suspicious.

TREATMENT:

A. *Cauterization of infected wounds.* Early cauterization will be of great assistance as a routine practice, and when properly carried out on small wounds may be all the treatment indicated. Fuming nitric acid is the best cautery when applied within forty-eight hours, on the point of a tapered glass rod or drop by drop from a capillary pipette. It is necessary to reach the deep crevices of the wound.

B. *Pasteur treatment.* The Pasteur treatment requires four to five weeks for the full development of immunity. Three weeks are required for the injections. It is a race between the virus and the vaccine. Immunity, when established, lasts a variable time. Delay in starting treatment may be responsible for a failure in protection.

In case of dog bite, cauterize the wound with fuming nitric acid. Do not kill the dog. Watch for symptoms before the dog is killed. If alive and well for twenty-one days, rabies excluded.

Dogs' heads should be sent to the Veterinary Department, State Agricultural College, Manhattan.

Rules for shipment by express of dogs or other animals, bodies, head or parts thereof, to laboratories.

(*a*) Agents must not accept for transportation the head of a dog or any other animal, sent for rabies examination, unless it shall have been prepared for shipment as hereinafter provided.

(*b*) The head of a dog or other animal so shipped must be placed in a tin or other metal container, which will not permit the leakage of fluids; such container shall then be placed in a second wooden or metal container with ice packed around it; such outside container must be so constructed that it will not permit the leakage of the ice water.

(*c*) All such packages must be labeled:

"CAUTION.—This package contains the head of a dog (or name of other animal) suspected of having died of hydrophobia."

(*d*) Such shipments tendered on Saturday, which cannot reach destination early enough for delivery on that day, and would, therefore, remain in the express office over Sunday, must be refused, and shipper requested to pack in ice and hold until Monday, so that they can be delivered without delay at destination.

(*e*) Require prepayment of charges on shipments of this kind.

Results in Schick Test and in Active Immunization Against Diphtheria.

We have from time to time, during this year and during 1920, directed attention to the high diphtheria death rates. The heavy case incidence and mortality have continued in spite of the complete knowledge available to physicians and health officials of procedures for the control of this disease. Health officers in certain of the large cities have been well aware of their responsibilities in this connection and have attempted to meet the situation through the more extensive use of the Schick test and through immunization of susceptibles thus discovered. This procedure has been used widely in recent months in New York city and in other municipalities. It is time to call attention to some of the results which have followed this procedure.

Doctors Park and Zhinger, of the New York city department of health, have tested over 52,000 children in forty-four schools of Manhattan and Bronx during the late winter and spring of 1921. Some of their conclusions on Schick testing and active immunization which these many tests have disclosed are as follows:

1. Children from the homes of the well-to-do have a higher percentage of positive Schick reactions than do children of poorer groups of the population living in closely crowded neighborhoods.

2. "Contact immunity" seems to be an important element in the establishment of so-called "natural immunity." Repeated exposure to the diphtheria bacillus in the congested districts seems to cause not only actual clinical cases of diphtheria, but also may produce mild infections of the mucous membranes which are not recognized as diphtheritic, but which may lead to the gradual development of antitoxic immunity.

3. There seems to be a racial factor in immunity to diphtheria. Negro children living in crowded neighborhoods show a high proportion of positive Schick reactions. Children of Italian extraction, living in the crowded East Harlem section, gave the lowest percentage of positive reactions. Jewish children also living in congested sections of the city showed a low, and children living in the less crowded areas a high percentage of positive reactions.

4. There seems to be a "family factor." There was a marked tendency for all the children of a given family to show the same Schick reaction. Where exceptions to this rule were found, the younger children, usually gave a positive and the older children a negative reaction. Again, different families living under closely parallel conditions would often show entirely different Schick reactions. With regard to the capacity for antitoxin production, there is probably an hereditary tendency on the part of the children of a family to respond either readily, or slowly and poorly, to repeated mild infections with the diphtheria bacillus.

5. Children once reacting negatively to the Schick test continue their immunity for considerable periods of time.

6. Natural antitoxin immunity in human beings, therefore, can be interpreted as due to a combination of factors in which contact immunization seems to play the most important part. The racial and hereditary factors, however, must also be considered.

7. Schick-positive children who have received toxin-antitoxin treatment should not be certified as immunes until a retest has been made.

The experience of Doctors Park and Zhinger appears to indicate that, for the present at least, it will be a better procedure to continue to give the Schick test in conjunction with the prophylactic treatment rather than to give the prophylactic treatment alone, as has been done in some cities. Otherwise large numbers of children, especially the "combined" reactors, will show severe reactions, and in this way the good will of the parents, of family physicians and of the children themselves may be lost.—*Metropolitan Bulletin.*

Report of Public Health Laboratory for July, 1921.

	July.		*June.*	
1. Complement fixation test for syphilis:				
Blood specimens from physicians:				
Positive	64		65	
Negative	321		312	
Doubtful	46		39	
Unsatisfactory	21		24	
Totals	——	452	——	440
Blood specimens from Lansing:				
Positive	20		19	
Negative	49		93	
Doubtful	27		29	
Unsatisfactory	19		10	
Totals	——	115	——	151
Spinal fluids:				
Positive	4		12	
Negative	18		5	
Doubtful	0		2	
Totals	——	22	——	19
2. Examination of sputum for tuberculosis:				
Positive	14		31	
Negative	114		111	
Unsatisfactory	5		11	
Totals	——	133	——	153
3. Examination of cultures for diphtheria:				
Positive	20		14	
Negative	86		51	
No growth	11		14	
Totals	——	117	——	79
4. Examination of smears for gonococcus:				
From physicians—				
Positive	5		5	
Negative	32		36	
Unsatisfactory	1		0	
Totals	——	38	——	41
From Lansing—				
Positive	8		3	
Negative	130		79	
Unsatisfactory	1		1	
Totals	——	139	——	83
5. Examination of Widals for typhoid:				
Positive	8		5	
Negative	46		22	
Unsatisfactory	10		10	
Totals	——	64	——	37
6. Stool cultures examined for typhoid—negative		5		....
7. Miscellaneous examinations:				
Urine culture	2		...	
Urine examined for tuberculosis	4		...	
Spinal fluid for meningococcus—negative	3		...	
Blood smears for malaria (negative, 1; unsatisfactory, 2)	3		...	
Blood smear for anemia	1		...	
Throat smear	1		...	
Blood culture	1		...	
Culture from abscess	1		...	
Animal head for rabies (positive, 1; negative, 4; unsatisfactory, 2)	7		...	
Totals	——	23	——	25
Grand totals		1,108		1,029

Report of Division of Water and Sewage, June and July, 1921.

ALBERT H. JEWELL, Chief.

Permits Issued or Refused for Waterworks and Sewerage.

Date.	*Place.*	*Nature of improvement.*
June 23	Jamestown	Water extensions.
June 13	Osborne	Water filtration.
June 28	Atchison	Sewer district C (Ext. sewer D, No. 10).

Final Inspections on Completed Work.

Date.	*Place.*	*Nature of improvement.*
June 3–8	Erie	Filter plant.

Inspections Made.

Date.	*Place.*	*Nature of improvement.*
June 6–8	Chanute	City water supply.
June 8–11	Burlington	Field laboratory test of filter plant.
June 10	Gridley	Santa Fe (private supply).
June 14–18	Emporia	Field test of filter plant.
June 14–15	Potwin	Special sewer inspection.
June 15	Council Grove	City water supply.
June 15	Oil Hill	Sewage disposal.
June 16	Osage City	City water supply.
June 16	Osage City	Sewage-plant investigation.
June 16	Valley Center	Proposed bottled water.
June 17	Lyndon	City water supply.
June 17	Lyndon	Sewage disposal.
June 20–25	El Dorado	Field test, filter plant.
June 20–25	El Dorado	Sewage-disposal inspection.
June 20–25	Augusta	Filter plant, field test.
June 20–25	Augusta	Sewage-disposal inspection.
June 20–25	Douglass	Filter plant, field test.
June 24	Parsons	Proposed water purification.
June 24	Wichita	Bottled water.
June 24	Wichita	Six railroad waters.
June 30	Highland	Water supply.
June 27–30	Eureka	Field kit, water plant.
July 1	Seneca	City water.
July 1	Seneca	Sewage disposal.
July 1	Sabetha	Proposed dam for surface water development.
July 1	Sabetha	Sewage disposal.
July 2	Hiawatha	City water supply.
July 2	Hiawatha	Sewage disposal.
July 18	Garnett	Creamery waste; sewage disposal.
July 19	Osborne	Water filtration.
July 19	Manhattan	Water supply.
July 19–20	Iola	Sewage disposal.
July 19–20	Iola	Water supply.
July 21	Norton	Water plant and sewage disposal (Sanatorium)
July 21	Humboldt	Special sewage disposal.
July 21	Humboldt	Water supply.
July 22	Chanute	Sewage-disposal plant.
July 22	Chanute	Water supply.
July 22	Marion	Water supply.
July 26	Sedgwick	Sewage-disposal plant.
July 26	Wichita	Water supply.
July 27	Hutchinson	Investigation of water supply.
July 27	St. John	Special sewage-disposal investigation.
July 27	St. John	Water supply.
July 28	Stafford	Sewage disposal.
July 28	Stafford	Water supply.
July 28	Turon	Water-supply investigation.
July 28	Preston	Water-supply investigation.
July 29	Pratt	Water and sewage inspection.
July 30	Great Bend	Water and sewage inspection.

Plans or preliminary reports have been received or conferences have been held with municipal authorities for new work at the following places:

Bennington	Water improvement.
Centralia	Water supply.
Clifton	Sewerage.
Emporia	Water improvement.
Emporia	Sewage disposal.
Fredonia	Swimming pool.
Highland	Water improvement.
Howard	Water filtration.
Howard	Sewerage.
Iola	Sewer extension.
Kansas City	Water improvement.
Kansas City	Swimming pool.
Lawrence	Water improvement.
Manhattan	Water softening.
Peabody	Water extensions.
Sabetha	Water filtration.
Valley Falls	Water filtration.

Record of analyses made in Water and Sewage Laboratory at Lawrence during months of June and July, 1921:

MONTH OF JUNE.

	Bact.	*Chem.*	*Miscel.*
City supply	544	8	..
Bottled waters	9	1	..
Private supplies	76	2	..
Railroad supplies	13	..	..
Ice	53	..	..
Ice supplies	11	..	..
Sand	..	..	3
Chlorides	..	5	..
Bacteriological, miscellaneous	5	..	..
Chemical	..	5	..
Totals	711	21	3—735

MONTH OF JULY.

	Bact.	*Chem.*	*Miscel.*
City supply	554	21	..
Bottled waters	7	1	..
Private supplies	116	1	..
Railroad supplies	5	..	..
Ice	24	..	..
Sand	..	..	1
Chlorides	..	3	..
Miscellaneous	15	..	..
Oil	..	..	1
Sewage	..	..	1
Totals	721	26	3—750

Licenses issued, June and July.

Date.	*Place.*	*Person or firm and purpose.*
June 14	Colony	Santa Fe. Shipped from Ottawa.
June 14	Gridley	Santa Fe. Private supply. Certificate refused.
June 7	Larned	Missouri Pacific. City supply.
June 7	Larned	Santa Fe. City supply.
June 7	Medicine Lodge	Santa Fe. City supply.
June 7	Washington	Missouri Pacific. City supply.
June 21	Abilene	Belle Springs Creamery Co. Manufactured ice.
June 21	Anthony	Anthony Salt Co. Manufactured ice.
July 22	Arkansas City	Arkansas City Ice & C. S. Co. Manufactured ice.
June 11	Baldwin	Thudium & Cooper. Manufactured ice.
June 21	Blue Rapids	Blue Rapids Ice & C. S. Co. Manufactured ice.
June 12	Burlington	Burlington Light, H. & P. Co. Manufactured ice.
June 21	Canton	Miller & Griswold. Manufactured ice.
June 28	Chanute	Chanute Ice & Lt. Co. Manufactured ice.
July 22	Chetopa	Chetopa Ice & Bottling Works. Manufactured ice.
June 11	Coffeyville	Coffeyville Ice Co. Manufactured ice.
June 11	Columbus	Columbus Ice Co. Manufactured ice.
June 28	El Dorado	El Dorado Elec. & Refrig. Co. Manufactured ice.
July 22	Erie	Crystal Ice & Bottling Co. Manufactured ice.
July 12	Eudora	Henry Hagenbuch & Co. Manufactured ice.
July 22	Fairbury, Neb.	Fairbury Ice Co. Manufactured ice.

Date.	*Place.*	*Person or firm and purpose.*
July 12	Galena	Union Ice & Fuel Co. Manufactured ice.
June 11	Garnett	Arctic Dairy Prod. Co. Manufactured ice.
June 11	Goodland	Goodland Ice Co. Manufactured ice.
June 29	Harper	Crystal Ice Co. Manufactured ice.
July 22	Haven	Haven Light & Ice Co. Manufactured ice.
June 21	Haviland	J. W. McNutt. Manufactured ice.
June 29	Hays	Golden Belt Creamery Co. Manufactured ice.
June 11	Herington	Herington Ice Co. Manufactured ice.
June 11	Highland	Charles B. Hughes. Manufactured ice.
July 12	Hill City	Wm. Kobler. Manufactured ice.
June 11	Humboldt	Humboldt Ice Co. Manufactured ice.
July 12	Hutchinson	Hutchinson Ice Co. Manufactured ice.
June 29	Iola	Iola Ice, C. S. & Fuel Co. Manufactured ice.
June 21	Junction City	Union Light & Power Co. Manufactured ice.
June 11	Kansas City	Alpine Ice Co. Manufactured ice.
June 11	Kansas City	Crystal Springs Ice, Grain & Fuel Co. Manuf. ice.
June 21	Kansas City	Railways Ice Co., Argentine plant. Manufactured ice.
June 21	Kansas City	Railways Ice Co., Armourdale plant. Manuf. ice.
July 22	Kingman	Kingman Ice & Creamery Co. Manufactured ice.
June 29	Kinsley	Kinsley Ice Co. Manufactured ice.
June 29	Leavenworth	Consumers Ice Co. Manufactured ice.
June 29	Leavenworth	D. S. Ryan. Manufactured ice.
July 12	Lincoln	J. C. Cooper. Manufactured ice.
June 29	McPherson	McPherson Creamery Co. Manufactured ice.
June 11	Macksville	W. C. Becker. Manufactured ice.
June 29	Marysville	Marysville Ice & C. S. Co. Manufactured ice.
June 21	Morganville	B. H. Ruffner. Natural ice.
July 22	Mulberry	Standard Ice & Fuel Co. Manufactured ice.
July 12	Mulvane	Mulvane Ice & C. S. Co. Manufactured ice.
July 22	Onaga	Onaga Light, Heat & Power Co. Manufactured ice.
June 11	Osawatomie	Osawatomie Ice Co. Manufactured ice.
June 29	Oswego	Citizens Ice Co. Manufactured ice.
July 22	Oxford	Oxford Ice & C. S. Co. Manufactured ice.
June 21	Pittsburg	Standard Ice & Fuel Co. Manufactured ice.
June 21	Plainville	Fred Reed. Manufactured ice.
June 21	Rossville	Rossville Ice Co. Manufactured ice.
June 21	Salina	Kansas Ice & Storage. Manufactured ice.
June 29	Scott City	Elmer Munder Ice Co. Manufactured ice.
July 22	Sharon Springs	W. E. McKinley. Manufactured ice.
June 11	Tonganoxie	Franklin Ice Cream Co. Manufactured ice.
June 29	Topeka	Mutual Ice & C. S. Co. Manufactured ice.
June 29	Troy	E. S. Leland. Manufactured ice.
June 11	Wamego	J. W. Machim. Manufactured ice.
June 11	White Water	White Water Ice Co. Manufacturd ice.
July 12	Wichita	Crystal Ice & Fuel Co. Manufactured ice.
June 11	Winfield	Winfield Ice & C. S. Co. Manufactured ice.
June 29	Yates Center	Yates Center Ice & C. S. Co. Manufactured ice.
June 7	El Dorado	F. S. Gilliland. Bottled water.
June 7	Valley Center	I. V. Burnham. Bottled water.

A Correction.

The March BULLETIN contained an article, under the caption, "The Duty of Being Right," a reprint from the New Haven *Register*, which stated that—

"The decision of the jury states clearly the fact that a man is not exonerated because he does that which he thinks is right. The responsibility is upon him of being right."

The writer has seen a copy of the jury's verdict, and it does not contain the above statement.

Farmer Hawbuck: I've bought a barometer, Mandy, to tell when its going to rain.

Mrs. Hawbuck: To tell when it's going to rain! Why, I never heard of such extravagance! What do ye s'pose the good Lord hez giv ye the rheumatism for?

"PEP."

Vigor, vitality, vim, and punch—
That's pep!
The courage to act on a sudden hunch—
That's pep!
The nerve to tackle the hardest thing,
With feet that climb, and hands that cling,
And a heart that never forgets to sing—
That's pep!

Sand and grit in a concrete base—
That's pep!
Friendly smile on an honest face—
That's pep!
The spirit that helps when another's down,
That knows how to scatter the blackest frown,
That loves its neighbor, that loves its town—
That's pep!

To say "I will"—for you know you can—
That's pep!
To look for the best in every man—
That's pep!
To meet each thundering knock-out blow,
And come back with a laugh, because you know
You'll get the best of the whole darned show—
That's pep!

—*Grace Bostwick in American Magazine.*

Well Qualified.

"He knows all about the newest books."

"That so?"

"Yes. He's an expert photographer, too. Understands films and how to develop them."

"Fine."

"He's taken a course in modern salesmanship and can sell anything from a package of pins up to a locomotive."

"Has a well-rounded education, I take it."

"He has. Knows chemistry, the foreign postal rates, parcel post rules and regulations, can speak three languages and is always courteous. Where do you think I could find a position for him?"

"I don't know, but with all those qualifications he ought to make a good clerk in a drug store."—*Pickup.*

A Man of Science.

"Who is the learned looking gent'eman?"

"An ornithologist."

"What's that?"

"Well, to you a jay bird is just a jay bird, but to him it's a feathered biped with a long Latin name."—*Birmingham Age-Herald.*

PUBLICATIONS OF THE STATE BOARD OF HEALTH.

Any or all of the following will be sent free to the address of any citizen of the state of Kansas upon request:

Communicable disease bulletins on—
  Diphtheria.
  Infantile Paralysis.
  Scarlet Fever.
  Smallpox.
  Whooping Cough.
  Measles.
  Tuberculosis.
  Typhoid Fever.
  Epidemic Poliomyelitis.
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Water and Sewage Laws, Instructions and Regulations.

Water and Sewage, Special Bulletin.

Laws, Rules and Regulations Governing Quarantine and Control of Communicable Diseases.

Sex Hygiene:
  Man Power.
  Keeping Fit.
  Parents' Part.
  The Girl's Part.
  The Problem of Sex Education in the Schools.

Bulletin of the Kansas State Board of Health, issued monthly. Sent regularly to any citizen making request. Address,

S. J. CRUMBINE, M. D.,
Secretary, State Board of Health,
TOPEKA, KAN.

BABY.

Where did you come from, baby dear?
"Out of the everywhere into the here."

Where did you get those eyes so blue?
"Out of the sky as I came through."

What makes the light in them sparkle and spin?
"Some of the starry twinkle left in."

Where did you get that little tear?
"I found it waiting when I got here."

What makes your forehead so smooth and high?
"A soft hand stroked it as I went by."

Whence that three-cornered smile of bliss?
"Three angels gave me at once a kiss."

Where did you get this pearly ear?
"God spoke, and it came out to hear."

Where did you get those arms and hands?
"Love made itself into bonds and bands."

Feet, whence did you come, you darling things?
"From the same box as the cherubs' wings."

How did you come to us, you dear?
"God thought about you and so I am here."

—*George MacDonald.*

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OF THE
Kansas State Board of Health

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If given early and in proper amounts, diphtheria antitoxin is a specific for diphtheria.

Have you had your children immunized against typhoid fever, smallpox, diphtheria and whooping cough?

If not, you are not doing your duty as a good parent.

The care of the child is an index of civilization, and infant mortality is the most sensitive sign we possess of social welfare.

If we could grapple with the whole child situation for one generation, our public health, our economic efficiency, the moral character, sanity and stability of our people would advance three generations in one—*Herbert Hoover.*

MORBIDITY REPORT FOR AUGUST, 1921.

COUNTIES AND CITIES.	Tuberculosis	Typhoid and Paratyphoid	Smallpox	Diphtheria	Influenza	Scarlet Fever	Measles (morbilli)	German Measles (rubella)	Whooping Cough	Chickenpox	Mumps	Pneumonia (all forms)	Meningitis (epidemic)	Poliomyelitis (epidemic)	Other diseases (see Addenda)
THE STATE	163	269	38	235	3	256	7	1	102	4	9	20	6	10	322
Allen, except	0	1	0	1	0	0	0	0	0	0	0	0	1	0	0
Iola	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Anderson	0	2	0	0	0	3	0	0	0	0	0	0	0	0	0
Atchison, except	0	0	0	3	0	2	0	0	2	0	0	0	0	0	1
Atchison city	3	0	1	9	0	0	0	0	5	0	0	0	0	0	0
Barber	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0
Barton, except	0	1	2	1	0	5	0	0	0	0	0	0	0	1	0
Great Bend	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bourbon, except	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0
Fort Scott	0	1	1	3	0	7	0	0	0	0	0	0	0	0	13
Brown	1	1	0	0	0	3	0	0	1	0	0	0	0	1	0
Butler, except	1	14	3	17	0	14	0	0	10	0	0	0	0	0	3
Augusta	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
El Dorado	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Chautauqua*	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Cherokee, except	0	1	0	4	0	1	0	0	6	0	0	0	1	0	4
Galena	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cheyenne	0	0	0	1	0	0	1	1	0	0	0	0	0	0	0
Clark	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2
Clay*	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Cloud, except	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
Concordia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coffey	2	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Comanche	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Cowley, except	3	4	0	6	0	9	0	0	0	0	1	0	0	0	15
Arkansas City	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Winfield	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crawford, except	2	4	0	4	0	4	0	0	0	0	0	1	0	0	3
Pittsburg	1	2	0	3	0	3	0	0	0	0	0	0	0	0	5
Decatur	0	1	0	0	0	3	0	0	0	0	0	0	0	0	0
Dickinson	3	4	0	1	0	9	1	0	0	0	0	0	0	0	0
Doniphan	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Douglas, except	5	1	0	1	0	1	0	0	1	0	0	0	0	0	19
Lawrence	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Edwards	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0
Elk	0	0	0	0	0	1	0	0	0	0	0	0	0	0	2
Ellis	0	0	0	1	0	0	0	0	0	0	0	0	0	0	4
Ellsworth	0	0	0	1	0	2	0	0	0	0	0	0	0	0	3
Finney	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ford, except	16	0	1	3	0	2	0	0	0	0	0	0	0	1	5
Dodge City	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Franklin, except	5	2	0	0	0	4	0	0	0	0	0	0	0	0	0
Ottawa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Geary, except	0	0	1	0	0	5	0	0	2	0	0	0	0	0	4
Junction City	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gove	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Graham	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Grant*	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Gray	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0
Greeley*	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Greenwood	0	3	0	3	0	2	0	0	0	0	0	0	0	0	2
Hamilton	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
Harper	2	3	0	2	0	3	0	0	0	0	0	0	0	0	1
Harvey, except	0	5	0	1	0	1	0	0	0	0	0	0	0	0	0
Newton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Haskell	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Hodgeman	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jackson	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jefferson	0	0	0	13	0	3	0	0	0	0	0	0	0	0	0
Jewell	2	0	0	0	0	9	0	0	0	0	0	0	0	0	0
Johnson	1	3	0	1	0	1	0	0	0	0	0	0	0	0	0
Kearny	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Kingman	1	0	0	0	0	1	0	0	0	0	0	0	0	0	1
Kiowa	1	1	0	0	0	0	1	0	1	0	0	0	0	0	2
Labette, except	0	1	3	1	0	0	0	0	0	0	0	0	0	0	13
Parsons	19	2	1	3	0	1	0	0	2	3	0	0	0	0	10
Lane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Leavenworth, except	1	2	0	3	0	1	0	0	0	0	0	6	0	0	1
Leavenworth city,	1	0	0	7	0	2	0	0	0	0	0	0	0	0	5

MORBIDITY REPORT FOR AUGUST, 1921—Concluded.

Counties and Cities.	Tuberculosis	Typhoid and Paratyphoid	Smallpox	Diphtheria	Influenza	Scarlet Fever	Measles (morbilli)	German Measles (rubella)	Whooping Cough	Chickenpox	Mumps	Pneumonia (all forms)	Meningitis (epidemic)	Poliomyelitis (epidemic)	Other diseases (see Addenda)
Lincoln	1	2	0	0	0	0	0	0	0	0	0	1	0	0	1
Linn	1	1	2	0	0	1	0	0	0	0	0	0	0	0	0
Logan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lyon, except	3	5	0	3	0	2	0	0	0	0	0	0	0	0	1
Emporia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Marion	2	0	0	2	0	4	0	0	6	0	0	1	0	0	2
Marshall	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
McPherson	11	0	0	0	0	0	0	0	1	0	2	0	1	0	0
Meade	0	3	0	0	0	1	0	0	0	0	0	0	0	0	0
Miami	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Mitchell	1	1	0	0	0	1	0	0	0	0	0	0	0	1	0
Montgomery, except	2	6	0	1	0	3	0	0	0	0	0	0	0	1	3
Coffeyville	3	2	0	7	0	6	0	0	0	0	0	0	0	0	0
Independence	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Morris	9	1	3	1	1	4	0	0	0	0	0	0	0	0	0
Morton	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
Nemaha	0	1	0	0	1	0	0	0	0	0	0	0	0	0	1
Neosho, except	2	3	0	1	0	6	0	0	1	0	0	0	0	0	5
Chanute	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ness	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Norton	5	0	3	0	0	2	0	0	0	0	0	0	0	0	0
Osage	2	2	0	2	0	2	0	0	0	0	0	0	0	0	0
Osborne	1	0	0	0	0	5	0	0	1	0	0	0	0	1	1
Ottawa	0	0	0	2	0	2	0	0	3	0	0	0	0	0	0
Pawnee	1	2	0	0	0	1	0	0	7	0	0	1	0	0	0
Phillips	3	1	0	0	0	8	0	0	0	0	0	0	2	0	0
Pottawatomie	0	0	0	2	0	4	0	0	4	0	0	0	0	0	0
Pratt	0	5	0	0	0	0	0	0	1	0	0	0	0	0	0
Rawlins	1	4	0	0	0	0	0	0	0	0	0	0	0	0	0
Reno, except	0	2	1	0	0	2	0	0	1	0	0	0	1	0	0
Hutchinson	3	4	3	14	0	3	0	0	0	0	0	0	0	1	7
Republic	0	1	0	0	0	2	0	0	0	0	0	0	0	0	2
Rice	0	2	0	2	0	7	0	0	0	0	0	0	0	0	0
Riley, except	0	2	0	0	0	1	0	0	0	0	0	0	0	0	1
Manhattan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rooks	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Rush	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Russell	2	2	0	0	0	1	0	0	0	0	0	0	0	0	0
Saline, except	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Salina	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0
Scott	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sedgwick, except	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
Wichita	1	119	5	19	0	25	1	0	22	0	2	3	0	1	34
Seward	0	0	0	5	0	1	0	0	0	0	0	0	0	0	0
Shawnee, except	1	3	0	5	0	4	0	0	0	0	0	0	0	0	3
Topeka	9	6	1	50	1	22	0	0	11	0	0	3	0	0	40
Sheridan	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Sherman	2	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Smith	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stafford	2	1	0	0	0	0	0	0	0	0	0	0	0	1	0
Stanton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stevens	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Sumner, except	2	11	0	1	0	11	0	0	3	0	0	0	0	1	1
Wellington	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Thomas*	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Trego	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wabaunsee	0	0	0	2	0	1	1	0	0	0	0	0	0	0	1
Wallace*	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Washington	1	1	0	0	0	1	0	0	0	0	0	1	0	0	0
Wichita	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wilson	0	2	0	2	0	2	0	0	0	0	3	0	0	0	0
Woodson	0	0	0	1	0	3	0	0	0	0	0	0	0	0	0
Wyandotte, except,	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Kansas City	16	5	3	16	0	5	0	0	10	1	1	1	0	0	53
Rosedale	0	0	0	0	0	0	0	0	0	0	0	0	0	0	43

* No report.

Other communicable diseases: Tetanus, 4; pellagra, 1; bacillary dysentery, 4; malaria, 9; erysipelas, 7; cancer, 23; trachoma, 2; gonorrhœa, 165; syphilis, 107.

Nutritional Value of Bottled Soft Drinks.

By M. E. Jaffa, M. S.

(Abstracted from California Board of Health Bulletin.)

One of the best definitions of food is: "Food is that which, when taken into the body, either builds tissue or yields energy."

If soft drinks meet either of these requirements they should be classed as a food and would be more or less valuable nutritionally.

According to the provisions of our pure-food law, food includes all articles used for food, drinks, confectionery or condiment, by man or other animals, whether simple, mixed or compounded. Under such a definition a bottled spring water, tea, coffee, etc., are classed as foods, although their nutritive value is nil. The subject is here discussed biologically and not legally.

Bottled drinks may be conveniently divided into four main classes:

1. Drinks compounded from artificial flavors, artificial coloring matter, and artificially sweetened.
2. Drinks compounded from artificial flavors, artificial coloring matter, and sweetened with sucrose.
3. Drinks compounded from fruit juices or syrup, with or without the addition of sucrose.
4. Drinks compounded from syrups containing stimulants such as caffein.

It is proposed to discuss each of the four classes separately. In order to do this logically and intelligently it will be necessary to compare briefly our views of nutrition to-day with those held ten or fifteen years ago.

We know to-day that all proteins have not the same biologic value; that cereal proteins are inadequate for optimum growth and development. Our knowledge of the nutritional value of fats is much more complete than it was ten years ago. We have had proved to us, as a result of nutritional investigations by some of our best men, that milk fat and egg-yolk fat stand out very prominently as sources of vitamine in addition to their high caloric value.

Again, we are much more familiar than we were with the body requirements for mineral matter and the sources of such in the different foods. We have been conclusively shown that in order that the diet may be adequately supplied with mineral matter it must be varied and contain a generous amount of fruit and vegetables. The latter also serve as most excellent sources of the water-soluble vitamines.

Class 1, or artificial drinks, is rarely, we are glad to say, met with to-day. A few years ago, however, drinks artificially sweetened with saccharin were quite common, but are now practically eliminated. The prohibition of the use of saccharin as an artificial sweetener has proved beneficial in every way in safeguarding the food of the consumer.

Class 2 comprises drinks containing artificial color and flavor, but sweetened with sugar (sucrose). These are the most commonly met with, and their food value lies mainly in the sugar added. The greater the concentration of sugar employed, and the larger the amount of syrup added to the bottle, the higher is the nutritional value.

An examination of a large number of the bottled soft drinks indicate that the sugar content of the individual bottles varies from five-tenths of an ounce to nine-tenths of an ounce, or an average of two rounded teaspoonfuls.

It will be observed that in addition to the sugar the drink often contains acids, chiefly citric, which have a certain therapeutic and hygienic value, but cannot be considered as being of any value nutritionally. The drinks of the second class do not yield any appreciable amount of mineral matter.

Class 3, drinks compounded from the fruit juices or syrup with or without the addition of sucrose. It goes without saying that this class is by far the most valuable of all, because in addition to the calories which have been previously referred to they contain no inconsiderable amount of fruit juice.

Fruits have long been recognized as being very valuable ingredients of the diet; the old idea being that these were valuable on account of the therapeutic action of the organic salts contained in the fruit, in addition to, of course, their value as a source of fruit sugar. Later investigations conclusively proved that fruit has an added value in that the mineral matter contained therein is basic in character and very necessary to offset the acid character of the minerals found in meat, cereals and eggs. Too much stress cannot be laid on the importance of including in the menu, therefore, a generous amount of fruits and vegetables if for no other reason than to be sure that there shall be a proper balance of the mineral matter so that the alkalinity of the blood shall not be interfered with. During the last few years, however, still further nutritional studies have indicated that the fruit juices contain an appreciable quantity of water-soluble vitamines, and, as previously stated, no diet can be complete without the presence of vitamines, both water-soluble and fat-soluble, and there is no better source of the former than fruits and vegetables.

It is of interest in this connection to note that, in a recent address on the value of fruit juices in bottled soft drinks, Dr. Carl Alsberg, chief of the Bureau of Chemistry, United States Department of Agriculture, says:

> "I simply want to point out here what I believe is a real opportunity for you to place your industry in the class of essential industries, and not in the class of nonessential industries some have suggested, but which does not have my sympathy. In addition to the advantage you will derive from the utilization of fruit juices and fruit concentrates directly in a business way, an outlet is offered for the utilization of great quantities of small fruits, apples, and the citrus fruits, which are now to a large extent an economic waste, because processes for their utilization have not been adequately developed. By the revision of your formulæ so as to utilize more fully the products of the field and orchard your industry will surely occupy a more prominent place in the foreground of our economic and industrial picture. To properly develop this line of endeavor you will probably require the services of skilled chemists."

The purity of these drinks, however, must be carefully safeguarded and not be found on the market as indicated by Doctor Wiley, who writes as follows:

> "Once at a summer resort I saw a booth where orangeade was being sold. The beverage was presumably made while you waited. A few oranges were constantly rolling up an inclined plane and dropping into a machine and disappearing, and the juice was going out of a side exit. The food authorities having examined this machine, found that the oranges were doing an endless stunt. It was Sisyphus translated into a citrus fruit. They escaped destruction entirely, while the reputed juice was wholly of artificial character. The application of the term 'lemonade,' 'orangeade' or 'limeade' to any preparation of this kind is misbranding, and the articles themselves are adulterated."

The chief beverage found on our markets to-day which contains caffein is Coca Cola, the basis of which is a syrup consisting of about one-half sugar, one-third water, with less than one per cent of phosphoric acid and a caffein content varying from 0.92 to 1.30 grains per fluid ounce. The syrup also contains small quantities of caramel, glycerine, lime juice, essential oils, and plant extractives. The above composition was offered as evidence before the Federal court in Chattanooga, and proved conclusively that the syrup contained no other alkaloid than caffein. It would be somewhat foolish to condemn the use of Coca Cola because it contains caffein, when this same alkaloid is found in tea and coffee. A cup of tea, as ordinarily made, contains about 1 grain of caffein; the corresponding figures for coffee is 1.7 grains. The average amount of caffein found by the Kentucky station as the result of the examination of twenty-five samples of caffein-bearing beverages was eight-tenths grain, with a minimum of four-tenths and a maximum of one and a quarter grains per bottle of six and one-half ounces.

It is almost unnecessary to state that it would be extremely unwise for those who cannot tolerate coffee, because of the harmful effects on the system of caffein, to partake of Coca Cola. Again, children should not be allowed to use this beverage, for the same reason that they are forbidden tea and coffee. For the adult harmful results would follow the excessive use of this drink, the injurious effects being the same as those resulting from the excessive use of coffee or tea.

The food value of Coca Cola drinks is practically the same as that noted for other soft drinks—about seventy calories per bottle of six and one-half fluid ounces, due practically to the content of sugar.

It is very encouraging to note, as indicated by the investigations of the Bureau of Chemistry, U. S. D. A., that there is an increasing demand for the natural or true flavors, evidenced by the larger use of fruits in the preparation of soft drinks. This type of flavor has also practically no nutritional value other than that which is contained in the alcohol carrying the flavor, etc. It must not be forgotten that there is a great difference between a fruit juice carrying the flavor and an extract containing the flavor of the fruit juice. In the former case we have all the nutritive value of the fruit, whereas in the latter case we have merely an alcoholic extract carrying only the flavor.

The foregoing is based on the supposition that the products are manufactured under clean and sanitary surroundings, because it is axiomatic that no matter how high is the food value of the ingredients in any formula, the nutritional worth of the finished product would be nil if prepared under insanitary conditions, in that it would probably breed disease and might cause an epidemic.

Getting Ready for School.

The State Board of Health has recently finished the tabulation of the result of free dental inspection in the schools of seven counties in Kansas. A total of 11,474 children were examined. Of this number 1,313 were found with defective vision; 544 were suffering from defective hearing; 805 were pronounced "mouth-breathers"—that is, they were apparently unable to breathe through the nose on account of adenoids and enlarged tonsils; 719 were suffering from enlarged cervical glands of the neck. The dentists found 935 abscessed teeth. There were also 10,801 cavities in the permanent teeth of these 11,474 school children, and 11,959 cavities in the temporary teeth. It was noted that 1,082 of these children were poorly developed.

The school census of 1921 shows that there are 522,457 children of school age in Kansas; that is, between the ages of 5 and 21. Next month close to 500,000 Kansas boys and girls will enter the public and private schools of the state to apply themselves to the task of "securing an education." Clothing and shoes have been put in order or purchased, the proper books secured, and the child is supposed to be ready for the first day of school.

In most instances little or no thought has been given to preparing the child against disease, or to the discovery and removal of physical handicaps which if unrecognized and uncorrected will furnish the soil for disease conditions that later may remain fixed and permanent. How many parents have been thoughtful or wise enough to have the teeth examined and have decay or defects removed? Who have thought it worth while to be assured that their child has clear vision, and thus may not be put to the strain of defective eyes and highly strung nervous condition in the daily use of the closely printed page? Where are the parents who were sufficiently interested in the physical welfare of their child to attempt to find out why the child habitually breathed through the mouth instead of the nose; who have been sufficiently concerned about the slight deafness of their child to have ears, nose and throat examined?

It is a pity that the physical welfare of the child is so sadly neglected to the permanent detriment of both body and mind, and its possible reactionary effect on the moral fibre of the child.

The State Board of Health wishes to ask, "Is your child ready for school?"

Children need models, not critics.

What we do not understand we do not possess.

In order to do a thing once some people have to do it twice.

If you are troubled with insomnia the best cure is to go to sleep and forget it. —*Bushwhacker.*

Report of Division of Water and Sewage, August, 1921.

ALBERT H. JEWELL, Chief.

Permits issued or refused for waterworks and Sewerage.

Date.	*Place.*	*Nature of improvement.*
Aug. 16	Bennington	Water supply.
Aug. 19	Chanute	Sewer extensions.
Aug. 16	Emporia	Water improvements (dam)
Aug. 16	Iola	Sewer extensions.
Aug. 16	Peabody	Extension to water mains.

Inspections Made.

Date.	*Place.*	*Nature of improvement.*
Aug. 4–5	Osage City	Special sewerage investigation.
Aug. 4	Burlingame	Sewage disposal.
Aug. 5	Holton	Special milk-waste investigation.
Aug. 10	Neodesha	City water supply; sewage disposal; Standard Oil refinery waste.
Aug. 11	Ottawa	California Springs bottled water; Fisher farm, bottled water and new filtration plant.
Aug. 8	Erie	Water supply; sewage disposal.
Aug. 9	Parsons	Water supply; sewage disposal.
Aug. 10	Oswego	Water supply; sewage disposal.
Aug. 11	Centralia	Proposed water and sewerage.
Aug. 9	Clifton	Waterworks.
Aug. 16–17	Paola	Water filtration.
Aug. 18	Victoria	Proposed waterworks.
Aug. 18	Hays	Waterworks; sewage disposal.
Aug. 19	Russell	City waterworks.
Aug. 20	Wilson	City waterworks.
Aug. 20	Bunker Hill	City waterworks.
Aug. 22	Ellsworth	City waterworks.
Aug. 22	Lyons	City waterworks.
Aug. 22	Kanopolis	City waterworks.
Aug. 23	Ellinwood	City waterworks.
Aug. 23	Lewis	City waterworks.
Aug. 23	Macksville	City waterworks.
Aug. 24	Sterling	City waterworks.
Aug. 24	Nickerson	Investigating city pump.
Aug. 25	Halstead	City waterworks.
Aug. 25	Newton	City waterworks; sewage disposal.
Aug. 26	Wathena	Proposed water supply and sewerage.
Aug. 26	Marion	New water supply.
Aug. 26	Florence	Contamination of city water supply.
Aug. 27	Salina	Waterworks; Salina Bottling Works.
Aug. 27	McPherson	City waterworks; sewage disposal.
Aug. 29	Chapman	Waterworks.
Aug. 29	Enterprise	Waterworks.
Aug. 29	Solomon	Waterworks.
Aug. 30	Abilene	Waterworks; bottling plant.
Aug. 30	Junction City	City waterworks; U. P. and Katy (city supply).
Aug. 30	Ogden	Waterworks.
Aug. 31	McPherson	Sewage disposal.

Plans or preliminary reports have been received or conferences have been held with municipal authorities for new work at the following places:

Abilene	Sewer Extension.
Bird City	Water supply.
Centralia	Water supply and sewerage.
Clifton	Sewerage.
Colony	Water supply and sewerage.
Conway Springs	Sewerage.
Emporia	Sewage disposal.
Herington	Water improvement.
Highland	Water improvement.
Howard	Water filtration and sewerage.
Kansas City	Water improvement.
Lawrence	Water improvement.
Manhattan	Water softening.
Marion	Water filtration.
McPherson	Water improvement.
Moline	Sewerage.
Plainville	Sewerage.

Sabetha	Water filtration.
Sterling	Sewerage.
Topeka	State Hospital, water improvement.
Utica	Water supply.
Valley Falls	Water filtration.
Victoria	Water supply.
Wathena	Water supply.
Lawrence	Municipal swimming pool.

Record of analyses made in water and sewage laboratory at Lawrence during August, 1921:

	Bact.	*Chemical.*	*Miscel.*
City supply	553	14	..
Bottled waters	6	1	..
Private supplies	127	1	..
Railroad supplies	5	..	..
Miscellaneous	4	..	..
Ice	25	..	..
Chlorides	..	..	3
Sand	..	..	1
Sewage	..	..	1
Oil	..	..	1
Lawrence city	27	..	..
Totals	747	16	6—769

Licenses Issued.

Date	*Place.*	*Nature of improvement.*
Aug. 19	Bonner Springs	Bonner Springs Ice & Mfg. Co. Manufactured ice.
Aug. 2	Eureka	Eureka Electric & Ice Co. Manufactured ice.
Aug. 2	Iuka	Taylor Ice Co. Manufactured ice.
Aug. 19	Lamar	Union Ice & Storage Co. Manufactured ice.
Aug. 2	Meade	R. S. Gerow. Manufactured ice.
Aug. 2	Minneapolis	Minneapolis Ice & C. S. Co. Manufactured ice.
Aug. 2	Oakley	W. M. Prather Ice Co. Manufactured ice.
Aug. 2	Summerfield	Craven Grain Co. Manufactured ice.
Aug. 19	Washington	Concordia Electric Light Co. Manufactured ice.
Aug. 22	Abilene	Abilena Sales Co. Bottled water.
Aug. 22	Augusta	Augusta Ice, Fuel & Gr. Co. Bottled water.
Aug. 31	Buffalo	Lithia Springs Corporation. Bottled water.
Aug. 16	Conway Springs	Frantz Water Co. Bottled water.
Aug. 25	El Dorado	Polar Water Co. Bottled water.
Aug. 5	Fort Scott	H. J. Wagner. Bottled water.
Aug. 22	Ottawa	California Springs Water Co. Bottled water.
Aug. 22	Parsons	Rockheart Water Co. Bottled water.
Aug. 25	Santa Barbara, Cal.	Veronica Medicinal Spring Water Co. Bottled water.
Aug. 16	Wichita	Allen Bottling Works. Bottled water.
Aug. 17	Wichita	Brook-Hill Water Co. Bottled water.
Aug. 9	Wichita	Wichita Vinegar and Bottling Works. Bottled water.
Aug. 31	Independence	Aganippe Spring Water Co. Bottled Water. License refused.

Just for Fun.

A schoolboy wrote an essay on cats. The chapter on different breeds supplies the following information:

"Cats that's made for little boys and girls to maul and tease is called Maltese cats. Some cats is known by their queer purrs—these are called Pursian cats. Cats with bad tempers is called Angorrie cats. Cats with deep feelin's is called Feline cats."

In public welfare work there is no mechanical substitute for brains, hearts and hands. But the possibilities of mere good intentions doing more harm than good are infinite. The best of brains, hearts and hands need to be directed by knowledge and experience.

Report of Public Health Laboratory for August, 1921.

	August.		*July.*	
1. Complement fixation test for syphilis:				
Blood specimens from physicians:				
Positive	56		64	
Negative	315		321	
Doubtful	29		46	
Unsatisfactory	4		21	
Anticomplementary	6		0	
Total		410		452
Blood specimens from Lansing:				
Positive	37		20	
Negative	98		49	
Doubtful	18		27	
Anticomplementary	1		0	
Unsatisfactory	0		19	
Total		154		115
2. Examination of sputum for tuberculosis:				
Positive	20		14	
Negative	95		114	
Unsatisfactory	7		5	
Total		122		133
3. Examination of cultures for diphtheria:				
Positive	43		20	
Negative	143		86	
No growth	10		11	
Total		196		117
4. Examination of smears for gonococcus:				
From physicians—				
Positive	4		5	
Negative	52		32	
Unsatisfactory	4		1	
Total		60		38
From Axford—				
Positive	11		8	
Negative	163		130	
Unsatisfactory	3		1	
Total		177		139
5. Examination of Widals for typhoid:				
Positive	18		8	
Negative	41		46	
Unsatisfactory	15		10	
Total		74		64
6. Stool cultures examined for typhoid:				
Negative	21		5	
Unsatisfactory	2		0	
Total		23		5
7. Miscellaneous examinations:				
Malaria (1 positive, 2 negative, 2 unsatisfactory)	5		..	
Smear for *Spirocheta pallida*—negative	1		..	
Vincent's angina—negative	2		..	
Urine for tuberculosis—negative	1		..	
Total		9		0
Grand total		1,225		1,108

A much excited health officer was looking for a public-health nurse for his county. He spoke to a friend of his—a man who had a wide acquaintance in the community—and stated a few of the qualifications already mentioned. In addition, he emphasized that the nurse must also have tact, must love work and want to serve, and must have initiative, sound health and a cheerful disposition; that she must know all about domestic science and the relation of foods to health, and must be able to inspire confidence in the people with whom she works so that they would naturally turn to her when they were in trouble. He wound up his list with the query, "Do you know of such a woman?" The man replied: "Good heavens, no. If I did, I'd marry her."—*Health News.*

The Ten-day Limit.

Kansas doctors have made vast strides toward perfection in the reporting of all births in the last few years. Nowadays it is only the few nonprogressive doctors who question the necessity of making proper reports. They realize that securing registration of the birth of a child born in their practice is part of the duty that they hold to the family, and most of them resent any imputation that they would neglect such an important charge. There is still a question in the minds of many, however, of the necessity for reporting within the ten-day limit that is according to statutory law.

It has been the custom of many doctors to hold all of their birth certificates until the end of the month, and this practice has been fostered by some local registrars, who have made a habit of calling upon the doctors in their districts once a month to collect certificates. The Division of Vital Statistics is now making a very serious effort to have all certificates of birth in the hands of the local registrar within ten days from the time of birth, and this has caused a little annoyance to some doctors, who feel that the old way of sending the certificates in whenever they feel inclined is good enough.

"Why should there be a ten-day limit?" some asked. Others have declared that it is impossible to observe such a time requirement. The first reason for the ten-day limit is the fact that the law requires it, and that any one failing in this requirement is neglectful of his legal duties. This is not strictly a Kansas law, but is the general law in every state that is included in the birth-registration area of the United States. Every doctor who has had any experience in dealing with a large practice knows that it is quite possible to get all of the data required for the report of a birth in this length of time. The other day our attention was called to a birth report dated in July by the doctor, but declared to properly belong in the month of June by the mother. The mother was right, but the doctor, being one of those content to send in his reports two or three times a year, had made an error of a month in the date. It is a very common thing to find mistakes in birth reports that are not promptly rendered, and the Division of Vital Statistics has to give very special attention to these reports.

It will interest those doctors who feel that it is impossible to fully observe the ten-day maximum to know that the state of New York makes a monthly report of all returns of births, and it shows in this report just how many each month have been filed beyond the ten-day limit. I have watched this report for many months, and have never yet observed it to be as high as one per cent of the total births reported. In the month of June, for example, 8,550 certificates were filed, and only 74 of them were beyond the ten-day limit. It is well to note that these figures are not for New York city, but for the state outside of New York city, so that the reporting doctors are those who work under much the same conditions as the physicians of Kansas.

We do not expect that Kansas registration of births will attain the pitch of excellence reached by New York state in a short time, but we expect to continue to urge registrars and doctors to be prompt in their reporting, and we feel sure that before a very long time Kansas will be in the front rank in this as in other respects.

Kansas Registration Area for Morbidity Reports.

Several months ago the health officers of Kansas were notified by circular letter that the State Department of Health would create a registration area for morbidity reports in Kansas by counties and by cities of the first class. The department is ready to announce those who have been tentatively admitted into such morbidity registration area.

Considerable difficulty was encountered in securing a measuring rod for morbidity reporting in Kansas counties and cities. At first it was thought that only the fatality rate would be utilized as a standard measure for morbidity reporting. Upon investigation it was found that such a standard measuring device for small population and small area could not be fairly used. Whereupon it was suggested that reportable cases per 1,000 inhabitants as reported for the so-called median year, together with the fatality rate, might be regarded as a proper standard for tentative admission into the morbidity registration area. Accordingly the following morbidity rate and cases per 1,000 inhabitants has been selected as a standard of admission:

Disease.	Fatality rate.
Cerebrospinal meningitis	32.4
Diphtheria	6.0
Measles	1.0
Poliomyelitis	30.0
Scarlet fever	2.0
Smallpox	0.1
Tuberculosis	....
Typhoid fever	10.0

The cases per thousand inhabitants reported for Kansas for a median year follow:

Cerebrospinal meningitis	0.03
Diphtheria	0.88
Measles	4.42
Poliomyelitis	0.04
Scarlet fever	1.30
Smallpox	1.40
Typhoid fever	0.97

The cases reported per thousand inhabitants for 1920 follow:

Cases Reported Per Thousand Inhabitants, 1920.

Cerebrospinal meningitis	0.04
Diphtheria	2.47
Measles	3.74
Poliomyelitis	0.01
Scarlet fever	2.87
Smallpox	2.20
Tuberculosis	0.98
Typhoid fever	0.65

The Epidemiologist and the executive officer have agreed upon the temporary admission of the following counties: Cherokee, Geary, Sumner, Cowley; also the following cities of the first class: Topeka, Wichita, Kansas City.

It is understood and herewith announced that these counties and cities are admitted to the registration area temporarily, pending a study of the complete records of reported cases from those counties and cities for the year 1921, which shall be made early in January, 1922.

It is hoped that every county and city of the first class in the state put forth the very greatest effort in securing complete morbidity reports to the end that they may be admitted into the registration area for morbidity reports for 1922.

Public Health Nursing.

GENERAL AIMS.

1. To standardize the work of the county nurses.
    - *a.* Prescribe various report blanks and cards.
    - *b.* Prepare general outline of work.
    - *c.* Receive and examine monthly reports from nurses.
    - *d.* Advise county nurses.
2. To establish a traveling library for nurses.
3. To stimulate more nurses to take up public-health work.
4. To improve standards of public-health nursing education.
    - *a.* Urge all training schools for nurses to include public-health work in their courses.
    - *b.* Encourage qualified young women to enter training schools giving such courses.
5. To establish a complete nursing service with a state director and district supervising nurses.
6. To hold conferences.
    - *a.* State.
    - *b.* District.

—*Michigan Public Health.*

A Prayer for the Every Day.

Let me not shut myself within myself,
  Nor dedicate my days to petty things.
Let there be many windows in my life,
  The entrance to my heart a door that swings,
Where through I go and come with eyes that smile;
  And folk without as gladly come to me,
That haply I may learn that thing worth while—
  The art of human hospitality.
Save me from self-preferment that would gain
  Its cloistered place, safe-sheltered from the strife:
But, purposeful and calm and sweet and sane,
  Lord, keep me in the living-room of Life!

—*Molly Anderson Haley.*

Eating to Live Well.

No one can have health who eats too much.

No one can have health who eats too often.

No one can have health who eats when tired, hurried, worried, anxious, or excited.

No one can have health who rises late, gulps down a hearty breakfast, swallows a sandwich and a glass of milk for lunch, and tops off the whole performance with a late dinner.

When you have eaten, do not wonder if the food will agree with you. When you begin to wonder, trouble begins. If you fear it, do not eat it. If you eat it, do not fear it.

Be cheerful at your meals. A sour countenance will give you a sour stomach.—*Good Health.*

The Lure of the Autumn Woods.

There's something a-tugging at my heart,
  A something I can't quite name,
That whispers of tree tops dipped in gold,
  And maples dyed with flame.

It breathes of high-arched pathways,
  Paved with mosaics so rare,
That the hand of some fine old master
  Seems to have laid them there.

It tells how busy squirrels heap high
  Their stores the whole day long,
While light wings whirr through the golden air,
  Little lost fragments of song.

With a sigh I turn from my musings
  To the commonplace tasks of the day;
But the sad, sweet voice of the autumn woods
  Is calling my heart away.

—*Florence Fuller.*

The sun is man's best friend. It keeps the air fit to breathe and ripens the food that comes from orchard and field. It destroys the germs of disease and promotes bodily health and vigor. It cheers the heart and warms the body and makes the world bright and beautiful. Get your share of sunshine.

Report of Public Health Laboratory for September, 1921.

OCTOBER 4, 1921.

From: *Public Health Laboratory.*
To: *Secretary State Board of Health.*
Subject: *Report of work done by Laboratory for the month of September, 1921.*

	September.		*August.*	
1. Complement fixation test—for syphilis:				
Blood specimens from physicians:				
Positive	49		56	
Negative	468		315	
Doubtful	43		29	
Unsatisfactory	26		4	
Total		586		404
Blood specimens from Lansing:				
Positive	17		37	
Negative	88		98	
Doubtful	13		18	
Unsatisfactory	1		1	
Total		119		154
2. Examination of sputum for tuberculosis:				
Positive	18		20	
Negative	83		95	
Unsatisfactory	4		7	
Total		105		122
3. Examination of cultures for diphtheria:				
Positive	308		43	
Negative	944		143	
No growth	117		10	
Unsatisfactory	3		...	
Total		1,372		196
4. Examination of smears for gonococcus:				
From physicians:				
Positive	6		4	
Negative	25		52	
Unsatisfactory	5		4	
Total		36		60
From Axford:				
Positive	17		11	
Negative	158		163	
Unsatisfactory	7		3	
Total		182		177
5. Examinations of Widals for typhoid:				
Positive	...		18	
Negative	34		41	
Unsatisfactory	3		15	
Total		37		74
6. Stool cultures examined for typhoid:				
Negative	15		21	
Unsatisfactory	...		2	
Total		15		23
7. Miscellaneous:				
Blood culture	1		...	
Animal heads for rabies:				
Positive	1		...	
Unsatisfactory	2		...	
Feces for tuberculosis	1		...	
Urine for tuberculosis	1		...	
Urine miscellaneous	2		...	
Differential count	2		...	
Blood for malaria:				
Positive	1		...	
Unsatisfactory	2		...	
Miscellaneous smears	3		...	
Pus for organisms	2		...	
Miscellaneous specimens	2		...	
Total		20		...
8. Spinal fluid:				
Wassermann tests:				
Specimens from Lansing (negative)	3		...	
Specimens from physicians (positive, 5; negative, 12; doubtful, 5)	22		...	
Globulin tests (positive, 15; negative, 10)	25		...	
Totals		50		...
Grand totals		2,522		1,225

THE MAN WHO WINS THE NAME.

The man who wins is the man who climbs
The ladder of life to the cheery chimes
Of the bells of labor, the bells of toil,
And isn't afraid his skin will spoil
If he face that shine of the glaring sun
And works in the light till his task is done;
A human engine with triple beam
And a hundred and fifty pounds of steam.

—*Unknown.*

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The BULLETIN regularly for the asking!

When in doubt, call the doctor!

Consult the weather, not the calendar, for change of clothing.

Read the label, or don't complain if you are stung.

Insist on net weight, to which you are entitled under the law.

The ten commandments and the golden rule have not been suspended. Guide right!

Every person under fifty years of age should have at least eight hours sleep daily.

Every sore throat occurring during an epidemic of diphtheria should be looked on with suspicion.

Semicentennial meeting of the American Public Health Association, New York City, November 14 to 18. All public-health workers should attend.

MORBIDITY REPORT FOR SEPTEMBER, 1921.

COUNTIES AND CITIES.	Tuberculosis	Typhoid and Paratyphoid	Smallpox	Diphtheria	Influenza	Scarlet Fever	Measles (morbilli)	German Measles (rubella)	Whooping Cough	Chickenpox	Mumps	Pneumonia (all forms)	Meningitis (epidemic)	Poliomyelitis (epidemic)	Other diseases (see Addenda)
THE STATE	103	150	23	1076	12	424	21	2	77	16	15	13	8	22	300
Allen, except	0	1	0	1	0	3	0	0	0	0	0	0	0	0	0
Iola	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Anderson	1	1	0	5	0	3	0	0	0	0	0	0	0	0	0
Atchison, except	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Atchison city	0	0	0	0	0	3	0	0	0	0	0	0	0	1	2
Barber	0	2	0	0	0	3	0	0	0	1	0	0	0	0	0
Barton, except	0	1	4	5	0	1	0	0	0	0	0	1	0	0	0
Great Bend	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bourbon, except	0	1	0	12	0	3	0	0	0	0	0	1	0	2	0
Fort Scott	1	1	0	15	0	1	0	0	0	0	0	0	0	0	3
Brown	1	1	0	1	6	2	0	0	1	0	0	0	1	1	0
Butler, except	3	3	0	61*	0	7	1	0	20	0	0	0	0	0	20
Augusta	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
El Dorado	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chase	1	0	0	4	0	2	0	0	0	0	0	0	0	0	1
Chautauqua†	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cherokee, except	2	1	0	19	0	7	0	0	0	0	0	0	0	0	1
Galena	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cheyenne	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0
Clark	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Clay	0	0	0	6	0	3	0	0	0	0	0	0	0	0	0
Cloud, except	0	0	0	8	0	13	0	0	0	0	0	0	0	0	2
Concordia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coffey	0	6	0	1	0	4	0	0	0	0	0	0	0	0	0
Comanche	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0
Cowley, except	3	3	0	14	0	8	1	0	6	0	1	0	0	0	5
Arkansas City	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Winfield	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crawford, except	0	3	0	50	1	5	0	0	0	0	0	0	0	0	1
Pittsburg	2	4	0	2	0	1	0	0	0	0	0	0	0	0	1
Decatur	0	0	0	1	0	3	0	0	0	0	0	0	0	0	0
Dickinson	0	1	0	1	0	11	1	0	0	0	1	0	0	0	1
Doniphan	0	0	0	1	2	3	0	0	2	0	0	0	0	0	0
Douglas, except	2	0	0	3	0	1	0	0	0	0	0	0	0	0	0
Lawrence	2	2	0	6	0	2	1	0	0	0	0	0	0	0	8
Edwards	0	1	0	1	0	3	0	0	0	0	0	0	0	0	0
Elk	1	1	0	2	1	2	1	0	0	0	0	0	0	0	0
Ellis	0	0	0	0	0	0	1	0	0	0	0	0	0	0	2
Ellsworth	0	1	0	1	0	1	0	0	0	0	1	0	0	0	1
Finney	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0
Ford, except	0	2	0	8	0	2	0	0	0	0	0	0	0	0	13
Dodge City	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Franklin, except	1	2	0	27	0	3	0	0	0	0	0	1	0	0	0
Ottawa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Geary, except	1	1	0	1	0	3	0	0	0	2	0	0	0	0	0
Junction City	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gove	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Graham	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0
Grant†	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Gray	0	2	0	2	0	3	0	0	0	0	3	0	0	0	0
Greeley	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Greenwood	2	2	0	5	0	1	0	0	0	0	0	0	0	0	1
Hamilton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Harper	0	1	0	6	0	1	0	0	0	0	0	0	0	0	2
Harvey, except	0	1	0	2	0	2	0	0	1	0	0	0	0	0	0
Newton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Haskell	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0
Hodgeman	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jackson	0	0	0	2	0	2	0	0	0	0	0	1	0	0	0
Jefferson	1	0	0	14	0	1	0	0	0	2	0	0	0	0	0
Jewell	0	1	0	2	0	15	0	0	0	0	0	0	1	0	0
Johnson	1	6	0	6	0	2	0	0	0	0	0	0	0	1	1
Kearny	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0
Kingman	0	0	0	0	0	2	0	0	0	5	0	0	0	0	1
Kiowa	0	0	0	3	0	1	0	0	2	0	0	0	0	0	0
Labette, except	0	3	0	15	0	1	0	0	1	0	0	0	0	0	14
Parsons	1	1	0	3	0	0	0	0	0	0	0	0	0	0	5
Lane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Leavenworth, except	1	2	0	7	0	1	0	0	0	0	0	0	0	0	3
Leavenworth city,	0	1	0	36	0	0	0	0	0	0	0	0	0	0	3

MORBIDITY REPORT FOR SEPTEMBER, 1921—Concluded.

COUNTIES AND CITIES.	Tuberculosis	Typhoid and Paratyphoid	Smallpox	Diphtheria	Influenza	Scarlet Fever	Measles (morbilli)	German Measles (rubella)	Whooping Cough	Chickenpox	Mumps	Pneumonia (all forms)	Meningitis (epidemic)	Poliomyelitis (epidemic)	Other diseases (see Addenda)
Lincoln	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0
Linn	0	2	3	2	4	4	0	0	0	0	0	0	0	0	0
Logan†	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Lyon, except	1	1	0	15	0	5	0	0	0	0	0	0	0	0	1
Emporia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Marion	7	5	0	2	0	3	0	0	3	0	0	0	0	0	2
Marshall	0	0	0	1	0	3	0	0	3	0	0	0	0	0	0
McPherson	0	0	0	3	0	1	0	0	2	0	0	0	0	1	0
Meade	0	1	0	1	0	0	0	0	0	0	0	0	1	0	0
Miami	2	5	0	25	0	2	0	0	0	0	0	0	0	0	0
Mitchell	1	1	0	0	0	6	0	0	0	0	0	0	2	0	0
Montgomery, except	6	5	0	46	0	12	0	0	0	0	0	0	0	1	9
Coffeyville	2	7	0	14	0	3	2	0	0	0	0	0	0	0	1
Independence	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Morris	0	0	0	7	0	10	0	0	0	0	0	1	0	0	0
Morton	0	0	0	0	0	4	1	0	0	0	0	0	0	1	0
Nemaha	0	0	0	5	0	3	0	0	0	0	0	0	0	0	0
Neosho, except	0	2	0	9	0	8	0	0	0	0	0	0	0	0	6
Chanute	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ness	0	2	0	1	0	2	0	0	0	0	0	0	0	0	0
Norton	19	0	1	1	0	0	1	0	0	0	0	0	0	0	0
Osage	1	3	0	14	0	4	0	0	0	0	0	0	0	0	1
Osborne	0	0	0	0	0	20	0	0	0	0	0	0	0	2	0
Ottawa	0	1	0	5	1	4	1	0	0	1	0	0	0	0	1
Pawnee	0	0	0	0	0	11	0	0	2	0	0	0	0	0	1
Phillips	2	1	0	3	0	9	0	0	0	0	0	0	0	0	0
Pottawatomie	0	0	0	4	0	6	0	0	1	0	0	0	0	0	0
Pratt	0	1	0	2	0	3	0	0	0	0	0	0	0	0	1
Rawlins	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0
Reno, except	0	0	0	2	0	5	0	0	0	0	0	0	0	0	0
Hutchinson	0	2	3	29	0	3	2	0	1	0	0	1	0	0	1
Republic	0	3	0	1	0	0	0	1	0	0	0	1	0	0	0
Rice	0	0	0	4	0	1	2	0	0	0	0	0	0	1	4
Riley, except	0	0	0	2	0	3	1	0	0	1	0	0	0	1	2
Manhattan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rooks	0	1	0	1	0	4	0	0	0	0	0	0	0	0	0
Rush	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0
Russell	0	1	1	5	0	4	0	0	0	0	0	0	0	0	0
Saline, except	1	1	0	1	0	1	0	0	0	0	0	0	1	0	0
Salina	0	1	0	4	0	1	0	0	0	0	0	0	0	0	6
Scott	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sedgwick, except	0	1	0	7	0	0	0	0	0	0	0	0	0	0	0
Wichita	5	13	0	140*	0	57	4	1	13	0	0	1	0	0	28
Seward	0	0	0	3	0	1	0	0	0	0	0	0	0	0	0
Shawnee, except	2	3	0	60	0	5	0	0	2	0	0	0	0	0	3
Topeka	15	3	0	220*	1	26	0	0	5	0	1	1	1	2	44
Sheridan	0	0	0	0	0	4	0	0	0	0	0	0	0	0	1
Sherman	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0
Smith	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
Stafford	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Stanton	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0
Stevens	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sumner, except	1	3	0	21	0	11	0	0	2	0	7	0	0	1	2
Wellington	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Thomas†	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Trego	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0
Wabaunsee	0	0	1	5	0	2	0	0	0	0	0	0	0	0	0
Wallace	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Washington	0	0	0	0	0	9	0	0	0	0	0	0	0	1	0
Wichita	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Wilson	0	1	0	28	0	7	0	0	1	0	0	0	0	0	0
Woodson	0	0	0	9	0	2	0	0	0	0	0	1	0	0	0
Wyandotte, except,	1	3	0	11	0	2	0	0	0	0	0	0	0	0	0
Kansas City	8	8	4	46	0	7	1	0	9	4	0	2	1	6	38
Rosedale	0	0	0	0	0	0	0	0	0	0	0	0	0	0	57

* Diphtheria carriers: Butler, 5; Wichita, 50; Topeka, 60.

† Delinquent.

Other communicable diseases: Malaria, 6; erysipelas, 3; cancer, 23; trachoma, 3; ophthalmia neonatorum, 1; gonorrhœa, 147; syphilis, 101; chancroid, 7; impetigo, 2; ileocolitis, 1; ulcero membranous tonsilitis, 2; septic sore throat, 2; tetanus, 1; encephalitis lethargica, 1.

Infantile Paralysis.

(EPIDEMIC POLIOMYELITIS.)

Definite knowledge of a communicable disease robs it of most of its terrors. Infantile paralysis has in the past been regarded as a most mysterious disease; but with the fuller knowledge of to-day much of the mystery has been cleared up.

The cause of the disease has been determined as a minute germ, much smaller than ordinary germs. It is capable of living in dust for some days, and even weeks, and for this reason dust was thought to be a factor in the spread of the disease. This may be so, but epidemics of the disease have occurred during wet weather.

METHOD OF SPREAD OF INFANTILE PARALYSIS.

The disease is now thought to be spread chiefly from person to person, but flies and other insects may play a part in its propagation. Though the disease is probably spread by direct contact, very frequently, in fact usually, there is no history of this contact. This is explained by the fact that relatively few persons are susceptible to the disease in a recognizable form; but though not susceptible, they are quite capable of carrying the germs around in their throats, and so infecting others. Individuals who carry germs of disease about without themselves falling ill with the disease are known as "carriers." Carriers of the germs of typhoid fever and of diphtheria are quite common, and there is good reason for supposing that in times of epidemics carriers of the germs of infantile paralysis are also common.

Of the persons who are susceptible, children form a large part (usually 90 per cent). And it has been found that the population of rural places are much more susceptible than the population of cities and larger towns.

SYMPTOMS.

Persons suffering from this disease can be divided into four classes.

1. Carriers which show no symptoms whatever.
2. Mild cases, which do not become paralyzed, and which are usually overlooked unless an epidemic is in progress.
3. Paralyzed cases, which seldom go undiagnosed.
4. Cases where the infection is so violent as to kill before signs of paralysis develop.

Symptoms of the mild cases do not vary much from the symptoms of the ordinary trivial sicknesses of childhood; but a combination of fever, vomiting, headache, constipation and drowsiness, especially if the child is irritable when awakened, should make one very suspicious and should cause one to send for a physician.

The paralyzed cases usually start with the above symptoms, and may seem to recover completely—in fact, may be up and around—only to be stricken down a day or so later, paralyzed in an arm or a leg.

The fourth group of cases, where the infection is so severe, requires no description here, since the physician is always sent for immediately.

PREVENTION.

It will be seen from the foregoing that in the prevention of disease two classes of cases have to be dealt with:

1. Recognized cases which most certainly carry the germs.
2. Unrecognized carriers of the germs.

Bearing these two classes of persons in mind, there are certain rules to follow:

1. Isolate all recognized cases; they certainly carry the germs.
2. Regard all persons who have been in contact with a case as carriers (some of them certainly are), and isolate them.
3. During an epidemic regard all cases of "indigestion" with fever as mild cases of infantile paralysis, and isolate them.

Mothers should realize that in visiting a house where a child is sick with doubtful symptoms, they may unconsciously pick up the germs of the disease and infect their own children.

For the prevention and management of epidemics coöperation between the public, the physicians and the health authorities is absolutely essential; otherwise many mild cases of the disease will never come to the attention of the health officers. These cases constitute a far greater menace than the paralyzed cases, since in a few days a mild case is able to be up and about, carrying the infection widespread; the severe cases, however, are of necessity confined to their homes.

It is the duty of every citizen, therefore, both for his own sake and the sake of the community, to see that mild cases of disease in the presence of an epidemic are brought to the attention of his local health officer.

Many physicians consider that the regular and intelligent use of nasal sprays and of gargles will prevent infection in certain cases. Others, on the other hand, think that while giving little protection, they convey a false sense of security to the person. If nasal sprays are used it should be remembered that the use of too strong solutions, by irritating the mucous membranes, will do more harm than good. Hydrogen peroxide diluted one part in three parts of water is a good solution to use.

TREATMENT.

In the acute stage of the disease the one essential thing is absolute rest in bed. On no account should the child be allowed to sit up or exert himself in any way. At present there are no drugs known which influence in any certain way the course of the disease, but many scientists are working on the problem, and soon, it is hoped, a curative serum will be available. Fortunately, there is a strong natural tendency for the damaged nerves to recover, and this tendency is greatly helped by complete rest. After two weeks or so of complete rest a little gentle massage of the paralyzed muscles is often valuable; but the patient should not be allowed to move his own limb for three or four weeks. Later if the function of the paralyzed muscles is not restored, mechanical appliances will be required.

CONCLUSIONS.

Infantile paralysis is an infectious disease.

It is probably spread by direct contact of persons; but since very few, relatively, are susceptible to the disease, while many may carry the germs, the factor of contact is not as obvious as in other infectious diseases.

Till further knowledge is acquired our chief hope of controlling epidemics of this disease is by the prompt isolation of cases and carriers.

The rules of the State Board of Health of Kansas require that all premises where cases of infantile paralysis occur shall be placarded and placed in quarantine.

The period of quarantine must be at least two weeks, and usually three weeks.

In addition, efficient screening and the use of approved insecticide shall be employed, so that insects shall not have access to the patient or his excretions.

This isolation can only be efficient if the public coöperates with the health authorities by seeing that all cases are promptly reported.

Tuberculosis: A Common Complaint.

Is tuberculosis a common disease that is quite susceptible of cure when recognized early and given proper treatment, or is it a terrible mysterious complaint that is too shameful to consider in a well-regulated practice, and cannot possibly be admitted to diagnosis in one of "our families" until it is so evident that little remains to be done other than to sign the death certificate?

The experience of the Kansas State Tuberculosis Association in the clinics that it has held in the twelve months just past seems to indicate that the disease is much more common than most doctors care to admit.

The State Tuberculosis Association is at present limited to one doctor and two nurses. It tries to do thorough work, so its maximum is two clinics per week. These are held all over Kansas, and experience shows that there is no part of the state really entitled to the boast that "we have no tuberculosis."

In holding 90 clinics there were examined 2,146 patients, this record not including reëxaminations. Of the 2,146 patients there were 522 actively tuberculous; 163 were inactive because their lesions were healed; 92 of the patients showed incipient tuberculosis, frequently in the shape of infected glands; 208 were classified as "tuberculosis suspects"; but were not in such condition that a positive diagnosis could be made; 35 had been seen and reported from previous clinics; 10 had bone tuberculosis and 4 had definite tuberculosis of lymphatic glands; 1,126 of the patients were nontuberculous.

Very naturally, the proportion of positive cases of tuberculosis found in sick patients at a tuberculosis clinic is greatly in excess of those found in general practice. Those attending the clinics come there in general on the advice of doctor or nurse, or led by their own suspicions, for the express purpose of finding out if they are among the tuberculous.

This work of one year included in the reported figures did not cover one-twentieth of the state, yet the clinic reports show a total of 1,034 cases, which represents more than half of the total number of reported cases in the whole state in one year. Are we to believe that only a small fraction of these 1,034 patients had consulted a doctor before coming to the clinics? No. Many of them came on the advice and by the instruction of their family physicians.

There cases were unreported because undiagnosed. They were undiagnosed, not because the doctors who had seen them overlooked or ignored the symptoms of tuberculosis, but because doctors still hang back from giving such a diagnosis to their patients. There are too many of us still clinging to the old feeling that in definitely diagnosing tuberculosis we are "signing the death warrant"; too many who fear to tell the patient that the indications point to tuberculosis, because still imbued with that ancient dread that was handed down to us by our preceptors of student days.

The fact is that the patients who derived most good from the clinics of last year were the 92 "incipients" and 208 "suspects." This goodly band of 300, being given the good advice of the clinic attendants as to proper modes of living, may easily conquer the disease before ever its ravages lead them to the place where they are classified as "active" cases.

It is at just that early stage of the disease that tuberculosis must be diagnosed in order to get definite results from treatment.

A doctor who finds a patient persistently below par, with symptoms not perhaps very definite, yet pointing to tuberculosis, should not wait for a positive diagnosis, nor allow his patient to get away without diagnosis of any kind.

Instead of saying, "I guess there isn't anything much needed except a little tonic," how much better to start the patient on the antituberculosis regimen of diet, rest and hygiene and warn him of the possibilities ahead!

Would it really "scare the patient to death"? The experience of the clinics has been to the contrary. It satisfies the patient that the doctor is really watchful of his interests and keeps him quiet and careful in the waiting time needed for a gain in health.

The clinics of the Kansas Tuberculosis Association have done a good work in the last year. They have been an active factor in fighting tuberculosis in Kansas; and chief among those to profit from this work are the 300 Kansas people who were found when only "suspects" or "incipient cases."

To me, the tragedy of this earth is a diseased child. The natural inheritance of a child is a joy and strength and growth and freedom. He is robbed of it all by disease. To me, the most tragic indictment of civilization is a diseased child—civilization that stands still and lets a little child, through ignorance of his parent or his teacher, or for any cause, be robbed of his divine inheritance of the joy and happiness of childhood—of the strength and growth of childhood! Medical inspection is intended to help prevent that tragedy—to help remove that terrible indictment against our Christian civilization.—*J. Y. Joyner, M. D., American Journal of Public Health.*

A Message of Hope.

By W. W. KEEN, M. D., LL. D., Emeritus Professor of Surgery at Jefferson Medical College, Philadelphia.

During an active surgical life of almost half a century, I have seen many hundreds of cases of cancer, and I am happy to assure my readers that it *is* curable, *provided* the advice of those who have been in constant contact with this terrible disease is sought and followed.

In a very large number of cases, especially cancer if the breast, the following represents the conversation which followed a careful examination:

"How long ago did you first notice this lump in your breast?"

"About a year ago." (Or it may be even longer.) This is an astonishingly frequent reply.

"Why in the world didn't you come to me *at once?*"

"Why, Doctor, it didn't hurt me at all." (As if "pain" meant that it was a dangerous lump, and "no pain" that it was a harmless lump! Cancer at the beginning is *almost never* painful.)

"I am sorry to tell you that I fear you have come too late to expect a cure. Had you come the moment you discovered this lump, I could have removed it by a very easy and safe operation, from which you would have been well within a week. But now I can promise nothing, except to do my very best for you."

A LITTLE FIRE SHOULD BE PUT OUT.

How often my heart has been wrung by such a conversation (worded, of course, more tactfully and not in this brusque, almost brutal, form) with a wife and mother, who, by her neglect to seek aid at once, has condemned her husband and her children to lose so dear a wife, so cherished a mother, just when she is most needed! How often have I said to myself, *"If only women knew; if only women knew!"*

Sometimes they would declare, "I was afraid to come, for fear you would tell me it was cancer." To which I have so often replied, "If you smelt smoke in your house would you sit still and wait because you were afraid that you would find your house was afire? Why not do for your own self what you would do for your own house? Find out the truth at once."

Sometimes she would say—I am almost ashamed to admit it, but it is true: "I did see my doctor, and he told me to wait and see whether it would grow any bigger." I am glad to say this is not true of the younger men, but only of some of the doctors who graduated years ago and have not kept up with our modern discoveries. "If you saw a little fire in your house," I would reply, "would you wait to see if it would grow bigger before you tried to put it out?"

If every woman who found a lump in her breast would consult a competent surgeon at once—that is to say, within forty-eight hours, if possible, but in any case within a week—I am sure that eighty-five out of every one hundred, and it might well be ninety out of every one hundred, would *be* cured and *stay* cured. So cancer *is* curable—provided you consult a good surgeon *at once.* Remember that, when you find a lump already formed, the disease has been at work for weeks, and it may be for three or four months, before a discoverable lump has been formed.

I have patients on whom I operated fifteen, twenty and more years ago, and they are still well; but they came early, except one happy case of about twenty years ago. One breast had been removed before I saw her. The disease had returned on that side, and had begun in the opposite breast. I operated for the recurrent disease, and she is well to-day—twenty years later.

The complete operation is not a very long one. It has to-day, remember, practically *no* mortality, and the recovery is complete in a week or ten days without much suffering. Before the days of antiseptic and aseptic surgery, the suffering was severe and prolonged, practically every case became infected, and the mortality was large. Usually the patient was in the hospital for from four to six weeks, or longer, and if erysipelas or severe infection occurred, it might be three or four months before she was well—if, indeed, she escaped with her life.

ANOTHER DANGER SIGN.

The same rule applies to women who notice any abnormal discharge of blood. Consult a competent surgeon *at once.* Certain internal cancers that were formerly beyond our power to cure are now well within our power, but solely on the condition noted—instant competent advice.

Every man or woman who passes blood from the bowels should at once seek an examination. That is the anticancer slogan: *"Instant, thorough examination by a competent surgeon."* It may come from a slight and easily curable affliction; but it may, on the other hand, be the very first observed sign of something serious. Here, again, pain or its absence is no criterion of danger.

In men, cancer of the stomach or of the bowels is the most frequent. If a man steadily loses weight—twenty, thirty, forty pounds—and has indigestion, internal cancer of the stomach or bowel should be suspected. If he does not soon get better, say within two months, the abdomen should be opened and any necessary operation be done. The diseased section of the stomach or bowel is removed; but too often the exploratory operation is done too late and the disease returns after a while. If no cancer is found, the abdomen is closed and he is practically sure to get well within ten to fourteen days.

Warts and moles—not such as come and go on the hands of young people, but those which remain apparently harmless for years without any change—are serious sources of danger, more particularly those which are discolored, brown or black. After many years of a quiet existence, for some unknown reason suddenly they begin to grow. Very soon the glands in the neck, armpit or groin begin to enlarge, at first always quite painlessly. When these glands become enlarged the whole system is often involved and the possibility of saving life is very doubtful.

All such permanent, pigmented moles and warts should be removed *before* they begin to grow, together with the whole thickness of the skin. To tie a woman's long hair around them is the very worst thing to do. It only stimulates them to grow more rapidly.

APPALLING STATISTICS.

The deaths from cancer are continually increasing, and have reached a most alarming total. In the World War, from April, 1917, to July, 1919, 76,433 of our gallant soldiers lost their lives by wounds and disease. In the same length of time about 180,000 of our population died from cancer —over 100,000 more than the total military deaths! Of our total annual deaths of persons over forty years of age, one person in every ten dies of cancer. Of all deaths among women over forty, one out of every eight is caused by cancer. Do not these figures startle you, my reader? Is it not all-important that you should recognize the red flag of "danger" when you discover the first recognizable sign of possible cancer—a "lump" anywhere, or an abnormal discharge of blood?

"What is the cause of cancer?" you ask: "and why aren't you busy finding it?" I answer that no one problem of disease is being attacked as is the cause of cancer. If we find the cause we will be at the half-way house on the road to prevention or cure.

There are special laboratories of research on cancer alone in Boston, New York city, Buffalo, London, Paris, Heidelberg and other cities, and also not a few personal investigators in other places, all laboring to discover the cause and how to prevent cancer and thus to avoid the dreadful alternative of a surgical operation.

The problem has been attacked from the surgical, the pathological, the microscopical, the chemical, the biological, and the experimental side. We have learned a great deal; for instance, that cancer is *always a strictly local* disease at the beginning, so that if you remove this small lump early enough, cure is almost certain. If you wait, the disease spreads by the absorbent vessels and the blood vessels to the neighboring glands (under the jaw, in the armpit or the groin, or in internal glands) or to distant parts, and then the case is hopeless for cure. All we can do is palliate. *Early* operation *before* the disease has thus spread is the *sine qua non* for success.

ULTIMATE SUCCESS CERTAIN.

The X-rays and radium are being very extensively experimented with, and most hopefully in certain forms of cancer. It is with this in view that the fine women of America presented Madame Curie with one gram (15 grains) of radium, costing one hundred thousand dollars. I have personally known of some remarkable cures by the X-rays and radium. But they should be *used only by experts*, or they may do irreparable damage. Even if they do no damage, in case they do not cure, their use not seldom delays operation until it is *too late*.

We have also learned by these laboratories of research that this, that and the other line of research is not the true road to the discovery of the cause. Thus, by exclusion, we are gradually limiting our researches to the methods which give promise of possible success.

I feel as certain of our ultimate success as I do of my own existence. I am expectant, hopeful and impatient for that glorious day to come. It will most likely come like a thief in the night to some lonely, patient, persistent worker. Then, indeed, after it has been tested and found true, may we chant a *Te Deum*—and turn our energies to the solution of the many other problems in medicine.

Above everything else *not* to do, I urge that none of the so-called "cancer cures" be used. I have seen the damage done by many of them, and the happy time when early operation might almost certainly have cured has gone by, and again "too late" is the sad verdict.

The American Society for the Control of Cancer was formed in 1913. Dr. Charles A. Powers, a retired surgeon of Denver, whom I am proud to call an old friend, is the president. They are carrying on a vigorous campaign of enlightenment to wake up the nation to the growing peril of cancer. They are a very live body. A large number of doctors are members, and, what is most encouraging, an increasing number of public-spirited men and women are also members. The nominal dues are five dollars a year, but many give up to fifty dollars a year as patrons, and others, to aid the cause, give their hundreds and thousands. The society sends out circulars, pamphlets, etc., by the thousand, organizes lecture courses in many places, and spreads abroad the good news of the curability of cancer, *provided* that their advice is strictly followed. This year they propose to make a special effort during the week of October 30 to November 5 to arouse a nation-wide interest and a nation-wide activity to control cancer, by persuading all who have or suspect they have the disease to secure immediate competent advice and treatment.

I earnestly urge that every reader of this paper will join this admirable and wholly altruistic society. It takes much effort and much money to wake up a whole nation; but that is exactly our intention. We doctors are heartily in accord with the objects of this society.

PREVENTING SICKNESS.

Did it ever occur to you that we of the medical profession, so far as I know, are the only persons who are doing our best to *prevent* sickness and death—the very source of our whole income? Who are the leaders in the prevention of typhoid fever, diphtheria, tuberculosis, and other grave dangers to life, and who are the promoters of the health of whole communities?—the doctors! I exult in this altruistic devotion! And not a few have given their own lives in the endeavor to save the lives of others! —*Woman's Home Companion.*

Why Clean Up?

1. Because our self-respect demands it.

2. Because filth is identified with ill health and disease.

3. Because clean surroundings make for a low death rate.

4. Because dirt menaces our welfare in every way, and our safety depends upon sanitation.

5. Because since sickness means waste, cleanliness is essential to our prosperity.

6. Because cleanliness appeals to our æsthetic feelings as well as our health sense.

7. Because clean homes and clean towns indicate a high type of citizenship.

8. Because prospective citizens in choosing a residence are influenced by civic appearances; therefore, orderly streets, yards and homes are factors in population growth.

9. Because cities should give their visitors an impression of progressiveness which will cause them to return.

10. Because clean physical exteriors encourage clean spiritual interiors, and thus affect our social and moral welfare.

WHY CLEAN UP? WELL, WHY NOT?—*Montana Bulletin.*

The children begin their education when they begin to play; for play not only affords an outlet for their energy, and so supplies one great means of growth and training, but places them in social relation with their mates and in conscious contact with the world about them. The old games that have been played by generations of children not only precede the training of the school and supplement it, but accomplish some results in the nature of the child which are beyond the reach of the school.—*Hamilton Wright Mabie.*

Principal Causes of Death.

CENSUS BUREAU'S SUMMARY OF MORTALITY STATISTICS, 1920.

WASHINGTON, D. C., Oct. 22, 1921.—The Department of Commerce announces that the Census Bureau's annual report on mortality statistics, which will be issued shortly, shows 1,142,578 deaths as having occurred in 1920 within the death registration area of continental United States, representing a death rate of 13.1 per 1,000 population, as compared with 12.9 in 1919, which was the lowest rate recorded in any year since the registration area was established in 1900.

The death registration area (exclusive of the territory of Hawaii) in 1920 comprised 34 states, the District of Columbia and 16 registration cities in nonregistration states, with a total estimated population on July 1, of 87,486,713, or 82.2 per cent of the estimated population of the United States. The state of Nebraska was added to the registration area in 1920, so that at present the only states not in the area are Alabama, Arizona, Arkansas, Georgia, Idaho, Iowa, Nevada, New Mexico, North Dakota, Oklahoma, South Dakota, Texas, West Virginia and Wyoming. The figures for the territory of Hawaii will appear in the report, but they are not included in this summary.

The death rate from pneumonia increased from 123.5 per 100,000 in 1919 to 137.3 in 1920. For chronic diseases of the heart the rate increased from 131 to 141.9; for cancer, from 80.5 to 83. Some of the other diseases for which the rate increased are whooping cough, measles, cerebral hemorrhage, congenital debility and malformations, puerperal fever, scarlet fever and appendicitis. The fatalaties caused by automobile accidents and injuries show an increase from 9.4 per 100,000 in 1919 to 10.4 in 1920.

A marked decrease is shown in the death rate from tuberculosis, which was 114.2 in 1920, as compared with 125.6 in 1919; also in the death rate from influenza, 71.0 in 1920 as against 98.8 the year before. The death rate from suicide declined from 11.4 in 1919 to 10.2 in 1920. There was a decline also in the rate for typhoid fever and in that for accidental drowning.

Table Showing for the death registration area in continental United States, in 1919 and 1920, the total number of deaths and the death rate, by leading causes, together with the percentage which each cause contributed to the total.

Cause of Death.	Number of deaths.		Rate per 100,000 population		Per cent of total.	
	1919.	1920.*	1919.	1920.	1919.	1920.
All Causes	1,096,436	1,142,558	1,287.4	1,306.0	100.0	100.0
Organic diseases of the heart	111,579	124,143	131.0	141.9	10.2	10.9
Pneumonia (all forms)	105,213	120,108	123.5	137.3	9.6	10.5
Tuberculosis (all forms)	*106,985*	*99,916*	*125.6*	*114.2*	*9.8*	*8.7*
Tuberculosis of the lungs†	94,772	88,195	111.3	100.8	8.6	7.7
Tuberculosis meningitis	5,175	4,895	6.1	5.6	0.5	0.4
Other forms of tuberculosis	7,038	6,826	8.3	7.8	0.6	0.6
Acute nephritis and Bright's disease	75,005	78,192	88.1	89.4	6.8	6.8
Cancer and other malignant tumors	68,551	72,931	80.5	83.4	6.3	6.4
Cerebral hemorrhage (apoplexy)	65,951	70,780	77.4	80.9	6.0	6.2
External causes (suicide and homicide excepted)	*61,268*	*62,492*	*71.9*	*71.4*	*5.6*	*5.5*
Accidental falls	9,629	10,323	11.3	11.8	0.9	0.9
Automobile accidents and injuries	7,968	9.103	9.4	10.4	0.7	0.8
Burns (conflagration excepted)	6,409	6,645	7.5	7.6	0.6	0.6
Railroad accidents and injuries	6,304	6,426	7.4	7.3	0.6	0.6
Accidental drowning	5,854	4,977	6.9	5.7	0.5	0.4
Accidental absorption of deleterious gases (conflagration excepted)	2,884	3,012	3.4	3.4	0.3	0.3
Accidental shooting	2,350	2,262	2.8	2.6	0.2	0.2
Mine accidents and injuries	2,179	2,171	2.6	2.5	0.2	0.2
Machinery accidents and injuries	2,082	2,153	2.4	2.5	0.2	0.2
Street-car accidents and injuries	1,916	1,746	2.2	2.0	0.2	0.2
Injuries by vehicles, other than railroad cars, street cars and automobiles	1,970	1,698	2.3	1.9	0.2	0.1
Effects of heat, other than burns	536	270	0.6	0.3	‡.......	‡.......
Other external causes	11,187	11,706	13.1	13.4	1.0	1.0
Influenza	84,113	62,097	98.8	71.0	7.7	5.4
Congenital debility and malformations	56,714	61,080	66.6	69.8	5.2	5.3
Diarrhea and enteritis (total)	*47,044*	*47,605*	*55.2*	*54.4*	*4.3*	*4.2*
Diarrhea and enteritis (under 2 years)	37,635	38,514	44.2	44.0	3.4	3.4
Diarrhea and enteritis (over 2 years)	9,409	9,091	11.0	10.4	0.9	0.8
Arterial diseases, atheroma, aneurism, etc	18,976	19,977	22.3	22.8	1.7	1.7
Diabetes	12,683	14,062	14.9	16.1	1.2	1.2
Diphtheria and croup	12,551	13,395	14.7	15.3	1.1	1.2
Appendicitis and typhlitis	10,029	11,702	11.8	13.4	0.9	1.0
Bronchitis	10,913	11,609	12.8	13.3	1.0	1.0
Puerperal affections, other than puerperal septicæmia	9,538	10,976	11.2	12.5	0.9	1.0
Whooping cough	4,714	10,968	5.5	12.5	0.4	1.0
Respiratory diseases, other than pneumonia and bronchitis	8,865	10,120	10.4	11.6	0.8	0.9
Hernia and intestinal obstruction	8,853	9,314	10.4	10.6	0.8	0.8
Suicide (total)	*9,732*	*8,959*	*11.4*	*10.2*	*0.9*	*0.8*
By firearms	3,302	3,169	3.9	3.6	0.3	0.3
By hanging or strangulation	1,726	1,616	2.0	1.8	0.2	0.1
By poison	1,546	1,417	1.8	1.6	0.1	0.1
By asphyxia	1,275	1,124	1.5	1.3	0.1	0.1
By cutting or piercing instruments	695	640	0.8	0.7	0.1	0.1
By drowning	684	555	0.8	0.1	0.6	‡.......
By jumping from high places	289	247	0.3	0.3	‡.......	‡.......
By crushing	100	97	0.1	0.1	‡.......	‡.......
Other suicides	115	94	0.1	0.1	‡.......	‡.......
Syphilis	7,347	7,969	8.6	9.1	0.7	0.7
Measles	3,296	7,712	3.9	8.8	0.3	0.7
Angina pectoris	6,538	7,571	7.7	8.6	0.6	0.7
Acute endocarditis	5,955	6,861	7.0	7.8	0.5	0.6
Typhoid fever	7,860	6,805	9.2	7.8	0.7	0.6
Cirrhosis of the liver	6,704	6,241	7.9	7.1	0.6	0.5
Homicide (total)	*6,386*	*6,205*	*7.5*	*7.1*	*0.6*	*0.5*
By firearms	4,567	4,477	5.4	5.1	0.4	0.4
By cutting or piercing instruments	687	645	0.8	0.7	0.1	0.1
By other means	1,132	1,083	1.3	1.2	0.1	0.1
Paralysis without specified cause	6,146	5,828	7.2	6.7	0.6	0.5
Puerperal septicæmia	4,950	5,800	5.8	6.6	0.5	0.5

TABLE SHOWING DEATH REGISTRATION—CONCLUDED.

CAUSE OF DEATH.	Number of deaths.		Rate per 100,000 population.		Per cent of total.	
	1919.	1920.*	1919.	1920.	1919.	1920.
Meningitis	5,508	5,281	6.5	6.0	0.5	0.5
General paralysis of the insane	4,823	5,030	5.7	5.7	0.4	0.4
Anemia, chlorosis	4,149	4,787	4.9	5.5	0.4	0.4
Rheumatism	3,907	4,287	4.6	4.9	0.4	0.4
Scarlet fever	2,383	4,004	2.8	4.6	0.2	0.4
Dysentery	3,732	3,574	4.4	4.1	0.3	0.3
Malaria	3,275	3,136	3.8	3.6	0.3	0.3
Erysipelas	2,186	2,721	2.6	3.1	0.2	0.2
Pellagra	2,806	2,322	3.3	2.7	0.3	0.2
Smallpox	358	508	0.4	0.6	‡	‡
All other defined causes	103,247	109,985	121.2	125.7	9.4	9.6
Unknown and ill-defined causes	15,603	15,505	18.3	17.7	1.4	1.4

* The state of Nebraska, with an estimated midyear population of 1,301,737, was admitted to the registration area in 1920.

† Includes acute miliary tuberculosis.

‡ Less than one-tenth of one per cent.

Report of Division of Water and Sewage, September, 1921.

ALBERT H. JEWELL, Chief.

Permits Issued or Refused for Waterworks and Sewerage.

Date.	*Place.*	*Nature of improvement.*
Sept. 1	Abilene	Sewer extension.
Sept. 8	Bird City	Waterworks.
Sept. 21	Atwood	Sewers and sewage disposal.
Sept. 29	Plainville	Sewers and sewage disposal.
Sept. 29	Victoria	Waterworks.

Inspections Made.

Date.	*Place.*	*Nature of improvement.*
Sept. 1	Westmoreland	Water supply.
Sept. 1	Wamego	Water supply.
Sept. 5	Topeka	Water filtration.
Sept. 26	Mulberry	City water supply.
Sept. 26	Arma	City water supply.
Sept. 26	Frontenac	City water supply.
Sept. 26	Girard	City water supply and sewage disposal.
Sept. 27	Manhattan	Water supply.
Sept. 27	McCune	City water supply.
Sept. 27	West Mineral	City water supply.
Sept. 27	Scammon	City water supply.
Sept. 27	Weir City	City water supply.
Sept. 27	Pittsburg	City water supply and sewage pollution of the stream below Pittsburg.
Sept. 27	Cherokee	City water supply.
Sept. 28	Columbus	City water supply.
Sept. 28	Baxter Springs	City water supply.
Sept. 28	Galena	City water supply; final inspection of new plant.
Sept. 29	Moline	City water supply; proposed sewage system.
Sept. 29	Chetopa	City water supply.
Sept. 30	Kansas City	Plans for Parsons water filtration plant.
Sept. 30	Elgin	New water supply; preliminary investigation.

Plans or preliminary reports have been received or conferences have been held with municipal authorities for new work at the following places:

Centralia	Water supply and sewerage.
Colony	Water supply and sewerage.
Conway Springs	Sewerage.
Emporia	Sewage disposal.
Herington	Water improvement.
Highland	Water improvement.
Howard	Water filtration and sewerage.
Lawrence	Water improvement.
Manhattan	Water softening.
Marion	Water filtration.
McPherson	Water improvement.
Moline	Sewerage.
Sterling	Sewerage.
Topeka	(State Hospital)—Water improvement.
Utica	Water supply.
Valley Falls	Water filtration.
Wathena	Water supply.
Lawrence	Municipal swimming pool.
Elgin	Waterworks and sewerage.
Parsons	Water filtration and extension.

Record of analyses made in Water and Sewage Laboratory at Lawrence during the month of September, 1921:

	Bact.	*Chem.*	*Miscel.*
City supply	531	13	..
Bottled waters	10	2	..
Private supplies	76	..	..
Railroad waters	3	..	..
Ice	6	..	..
Ice supply	7	..	..
Bacteriological, miscellaneous	82	..	..
Chemical, miscellaneous	..	3	..
Chlorides	..	..	6
	715	18	6—739

Licenses Issued.

Date.	*Place.*	*Person or firm and purpose.*
Sept. 17	Altoona	Altoona Ice Company. Manufactured ice.
Sept. 28	Cunningham	Hay Brothers. Manufactured ice.
Sept. 17	Conway Springs	Frantz Ice Co. Manufactured ice.
Sept. 1	Lyons	Lyons Ice Co. Manufactured ice.
Sept. 28	Parsons	Federal Ice Co. Manufactured ice.
Sept. 17	Pawnee Rock	W. H. Billups. Manufactured ice.
Sept. 1	St. John	St. John Mills. Manufactured ice.
Sept. 1	Wa Keeney	Guy DeBoer. Manufactured ice.
Sept. 1	Weir City	Union Ice & C. S. Co. Manufactured ice.
Sept. 17	Wellington	Wellington Ice and C. S. Co. Manufactured ice.
Sept. 12	Argentine	Tucker Mineral Springs. Bottled water.
Sept. 8	Brooklyn, N. Y.	Kalak Water Company. Bottled water.
Sept. 29	Coffeyville	Whistle Bottling Works. Bottled water.
Sept. 2	El Dorado	A. A. Pike. Bottled water.
Sept. 2	French Lick, Ind.	French Lick Springs Hotel Co. Bottled water.
Sept. 7	Manitou, Colo.	Manitou Min. Water Co. Bottled water.
Sept. 7	Salina	Salina Bottling Korks. Bottled water.
Sept. 2	S. Poland, Me.	Hiram Ricker & Son. Bottled water.
Sept. 8	Waconda Springs	Waconda Sanitarium. Bottled water.
Sept. 7	Wakesha, Wis.	White Rock Mineral Springs Co. Bottled water.

OCTOBER TIME IN KANSAS.

By W. E. Blackburn.

THE very air is invigorant, fragrant from the harvest spiced with wood smoke, bracing from the first frosts, scintillant with the glorious sunshine that fills the shortening autumn days with splendor and makes thin and luminous the attending shadow.

"Bob White" shrills of "more wet, more wet," his Quakerish little wife, with half-grown brood trimly speeds across the roadway into the ripening corn or with musical "whir-r" rises, to dive into the distant sea of undulating brown.

Prairie larks trill and carol on the rusty wire, or perched on the infrequent posts that hold the cattle from the ripened field. Hawks fly low, frightened sparrows flutter into trees and hedge row, rabbits scurry from bare pastures to grassy covert, or sit erect and watch with distended eye, quivering nostril and rigid ear, the impending danger.

The murmur of voices, the morning cock crow, the lowing of cattle are distant music, carried softly to the ear by the voluptuous air.

Corn shocks dot the field—tents of an army that stands near by in whispering ranks. A multitude of peace and plenty; no arms; no equipment, but a haversack of golden grain on hip or shoulder. Save a weary few, they stand expectant, awaiting to deliver their garnered wealth, be mustered out and with empty pockets, light hearts and fluttering banners retrace their steps via the moldering way to the place whence they came, and rest. In rusty velvet fields, big, dusky haystacks stand in herds or gather about the barn, shouldering one another in ponderous good humor.

From the inspiration of the caressing air, the peaceful, plenteous view, satisfied achievements of a summer's work, of goodly store from nature's plenty, we look with brightened eye, bounding blood and defiant head, to the north, undaunted by the icy breath that tells of coming snow.

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Kansas State Board of Health

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S. J. CRUMBINE, M.D., Editor.

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No Christmas can be as merry as it should be without Christmas seals.

The biggest fight in Kansas is the war against tuberculosis. On which side are you? Buy Christmas seals.

The Kansas State Tuberculosis Association is doing its best to whip the enemy that stalks in the dark. What about you? Buy Christmas seals.

There are no "duds" among Christmas seals. Every one registers a blow at tuberculosis. See how many you can use, not how few.

One Kansas battle never ends. It is the crusade against tuberculosis. Christmas seals pay the bills. Are you supporting this campaign?

About 2,500 persons were examined in the free tuberculosis clinics of Kansas last year. This work is supported through the annual sales of Christmas seals. Keep it going.

In 1912 Kansas lost 1,085 lives through tuberculosis; in 1920, 869. Kansas is winning the fight against the white plague. Don't you want to be a winner? Then buy Christmas seals.

National Cancer week, October 30 to November 5, was quite largely observed in Kansas. This afforded an especial opportunity for disseminating knowledge, which should lead to the early recognition and treatment of cancer and thereby result in the saving of human life in the years to come.

The annual meeting of the Kansas Public Health Association, in connection with the Kansas Conference of Social Work, will be held in Topeka December 6, 7 and 8. At this meeting the election of officers will be held and attention will be given to plans of work for the ensuing year.

MORBIDITY REPORT FOR OCTOBER, 1921.

COUNTIES AND CITIES.	Tuberculosis	Typhoid and Paratyphoid	Smallpox	Diphtheria	Influenza	Scarlet Fever	Measles (morbilli)	German Measles (rubella)	Whooping Cough	Chickenpox	Mumps	Pneumonia (acute) (all forms)	Meningitis (epidemic)	Poliomyelitis (epidemic)	Other Diseases (see Addenda)
THE STATE	218	111	56	2623	6	1056	11	4	64	126	11	43	11	18	326
Allen, except	8	1	0	47	0	15	0	0	0	0	0	0	0	1	0
Iola	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Anderson	0	0	1	14	0	8	0	0	0	0	0	0	0	0	0
Atchison, except	1	0	0	6	0	1	0	0	0	0	0	2	0	0	0
Atchison city	1	2	0	16	0	7	0	0	2	0	0	0	0	0	1
Barber	0	1	0	2	0	2	0	0	0	0	0	0	0	0	0
Barton, except	0	0	13	4	0	14	0	0	0	1	0	1	2	0	0
Great Bend	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bourbon, except	0	2	0	41	0	7	0	0	0	0	0	0	0	0	2
Fort Scott	1	4	0	45	0	13	0	0	0	0	0	0	0	0	7
Brown	2	5	0	5	0	10	0	0	4	1	0	0	0	0	1
Butler, except	4	6	0	101	0	17	1	0	7	2	0	2	0	0	30
Augusta	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
El Dorado	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chase	1	2	0	1	0	3	0	0	0	0	0	0	0	0	0
Chautauqua	0	0	0	3	0	2	0	0	0	0	0	0	0	0	0
Cherokee except	2	1	0	53	0	9	1	0	0	2	0	2	0	0	1
Galena	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cheyenne	1	0	0	5	0	5	0	0	0	0	0	0	0	0	0
Clark	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0
Clay	0	0	1	17	0	15	0	0	0	0	0	0	1	0	0
Cloud except	2	1	0	13	0	34	0	0	0	1	0	0	0	0	1
Concordia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coffey	0	0	0	5	0	2	0	0	0	0	0	0	0	0	0
Comanche	0	0	0	3	0	1	0	0	0	0	0	0	0	0	0
Cowley except	19	3	0	33	1	16	0	0	5	0	1	5	0	0	3
Arkansas City	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Winfield	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crawford, except	1	2	0	74	3	23	0	0	0	0	0	0	0	0	0
Pittsburg	0	1	0	19	0	12	0	0	0	0	0	0	0	0	1
Decatur	1	0	0	0	0	3	0	0	0	0	0	1	0	1	0
Dickinson	0	0	0	4	0	30	0	0	1	8	0	0	0	0	0
Doniphan	0	0	0	18	0	4	0	0	0	1	0	0	0	0	1
Douglas, except	2	2	0	14	0	4	0	0	0	0	0	1	0	1	0
Lawrence	4	5	0	9	0	17	0	0	0	5	0	0	0	0	3
Edwards	0	3	0	2	0	2	0	0	0	0	0	0	0	0	1
Elk	0	0	0	3	0	1	0	0	0	0	0	0	0	0	0
Ellis	0	0	0	9	0	5	0	0	0	0	0	0	0	0	1
Ellsworth	0	1	0	1	0	1	0	0	0	0	0	0	0	0	2
Finney	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0
Ford, except	12	0	0	12	0	12	1	0	0	5	0	0	0	0	6
Dodge City	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Franklin, except	5	1	0	70	0	1	1	0	0	1	0	0	0	0	1
Ottawa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Geary, except	2	0	0	3	0	19	1	2	0	3	0	0	0	0	1
Junction City	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gove	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Graham	1	0	0	6	0	22	0	0	0	0	0	0	0	0	0
Grant†	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Gray	0	1	0	9	0	1	0	0	0	0	3	0	0	0	0
Greeley†	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Greenwood	1	0	0	22	0	2	0	0	14	7	0	1	0	0	0
Hamilton*	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Harper	0	0	0	26	0	3	0	0	0	0	0	0	0	0	2
Harvey, except	1	0	0	14	0	8	0	0	0	0	0	0	0	0	0
Newton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Haskell	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hodgeman	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0
Jackson	1	0	1	4	0	2	0	0	0	0	0	0	0	0	0
Jefferson	0	1	5	20	0	14	0	0	0	8	0	0	0	0	0
Jewell	1	1	0	2	0	33	0	0	0	2	0	0	0	0	0
Johnson	0	0	0	26	0	15	1	0	0	1	0	0	0	0	1
Kearny	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Kingman	0	2	0	4	0	5	0	0	0	1	0	0	0	0	0
Kiowa	0	0	0	0	0	10	0	0	4	0	0	0	0	0	0
Labette, except	2	3	1	42	0	6	0	0	0	0	0	0	0	0	11
Parsons	5	2	0	5	0	5	0	0	0	0	0	0	0	0	2
Lane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Leavenworth, except	0	1	0	30	0	11	0	0	0	0	0	0	0	0	3
Leavenworth city	2	1	0	39	0	6	0	0	0	0	0	2	0	0	0

MORBIDITY REPORT FOR OCTOBER, 1921—Concluded.

COUNTIES AND CITIES.	Tuberculosis	Typhoid and Paratyphoid	Smallpox	Diphtheria	Influenza	Scarlet Fever	Measles (morbilli)	German Measles (rubella)	Whooping Cough	Chickenpox	Mumps	Pneumonia (acute) (all forms)	Meningitis (epidemic)	Poliomyelitis (epidemic.)	Other Diseases (see Addenda)
Lincoln	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0
Linn	0	0	0	37	0	19	0	0	0	6	0	0	0	0	0
Logan	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
Lyon, except	9	1	3	67	0	9	0	0	0	0	0	0	0	0	1
Emporia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Marion	3	4	0	9	0	6	0	0	1	0	0	0	0	0	1
Marshall	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0
McPherson	15	0	0	3	0	8	0	0	0	0	0	0	0	0	0
Meade	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Miami	0	4	0	45	0	13	0	0	5	0	0	0	0	0	0
Mitchell	0	0	0	1	0	4	0	0	0	1	0	0	0	0	0
Montgomery, except	2	2	4	81	0	18	0	0	0	0	0	2	0	0	0
Coffeyville	2	0	0	36	0	2	1	0	0	0	0	1	0	0	0
Independence	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Morris	0	0	0	16	0	19	0	0	0	0	0	0	0	0	0
Morton	1	4	0	0	0	13	0	0	0	0	0	0	0	0	1
Nemaha	0	1	0	5	0	1	0	0	0	0	0	1	0	0	1
Neosho, except	8	1	0	65	0	27	0	1	2	0	0	2	0	0	2
Chanute	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ness	1	2	0	1	0	5	0	0	0	0	0	1	0	0	0
Norton	8	8	0	1	0	4	0	0	0	0	0	0	0	1	0
Osage	0	0	0	53*	0	6	0	0	0	6	0	0	0	1	0
Osborne	3	0	0	0	0	24	1	0	2	6	0	0	0	0	0
Ottawa	0	0	0	26	0	11	1	0	0	7	0	0	0	0	0
Pawnee	0	1	0	0	0	2	0	0	0	0	1	1	0	0	0
Phillips	1	0	0	6	0	27	0	0	2	0	0	0	2	0	1
Pottawatomie	1	0	0	7	0	12	0	0	1	1	0	0	0	0	0
Pratt	0	0	0	22	0	11	0	0	0	0	0	0	0	1	0
Rawlins	0	1	0	0	0	5	0	0	0	0	0	0	0	0	0
Reno, except	1	3	1	16	0	7	0	0	0	0	0	0	0	1	2
Hutchinson	0	1	9	65	0	12	0	0	0	4	0	2	0	0	1
Republic	1	1	0	8	0	2	0	0	1	0	0	1	0	0	1
Rice	0	0	0	7	0	6	0	0	0	0	0	0	0	0	3
Riley, except	1	0	0	1	0	8	0	0	0	2	0	1	0	0	3
Manhattan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rooks	0	0	0	0	0	11	0	0	0	0	0	0	0	0	0
Rush†	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Russell	0	0	0	2	0	8	0	0	0	0	0	0	0	0	0
Saline, except	0	0	0	5	0	1	0	0	0	0	0	0	0	0	0
Salina	0	0	0	2	0	1	0	0	0	0	0	0	0	0	8
Scott	1	0	0	0	0	5	0	0	0	0	0	0	0	0	0
Sedgwick, except	20	0	0	31	0	29	0	0	0	0	0	0	0	0	0
Wichita	4	3	0	341*	2	84	1	0	3	1	2	0	2	0	39
Seward	0	0	0	7	0	4	0	0	0	0	0	0	0	0	0
Shawnee, except	0	0	0	98	0	13	0	0	0	1	0	0	0	3	2
Topeka	13	0	1	351*	0	25	0	0	1	1	0	4	0	2	30
Sheridan	0	0	0	0	0	1	0	0	0	2	0	0	0	0	0
Sherman	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0
Smith	1	2	0	1	0	13	0	0	0	1	0	0	0	0	0
Stafford	0	1	0	7	0	5	0	0	0	0	0	0	0	0	0
Stanton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stevens	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sumner, except	19	0	2	49*	0	27	0	1	2	4	2	0	1	0	2
Wellington	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Thomas†	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Trego	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
Wabaunsee	0	0	6	19	0	9	0	0	0	0	0	0	0	0	1
Wallace	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
Washington	0	0	0	2	0	8	0	0	0	0	0	0	0	0	0
Wichita	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0
Wilson	0	0	1	74	0	14	0	0	1	1	1	1	0	0	0
Woodson	1	1	0	22	0	10	0	0	0	4	0	0	0	0	0
Wyandotte, except	0	0	0	10	0	15	0	0	0	0	0	0	0	1	0
Kansas City	17	11	7	117	0	26	1	0	5	29	1	9	2	2	69
Rosedale	0	0	0	0	0	0	0	0	0	0	0	0	0	0	76

* Diphtheria carriers: Osage, 7; Wichita, 125; Topeka, 81; Sumner, 8.

† Delinquent.

Other communicable diseases: Erysipelas, 6; cancer, 20; ophthalmia neonatorum, 1; trachoma, 8; gonorrhœa, 146; syphilis, 124; scabies, 1; chancroid, 18; paresis, 1; lethargic encephalitis, 1.

A Milk Survey of Eight Southeast Kansas Towns.

Food and Drugs Division.

It was the original intention of this division to conduct a rather general investigation of the milk supply of the state in towns of 3,000 and over, but after plans were made it was decided impossible, for the reason that funds were not available for procuring bacteriologists for doing the field work. We expected to rely on the institutions—that is, the Agricultural College and the University—for that material but found that the bacteriologists there were not employed by the institutions except for the school period, which closes about the 1st of June. On this account we were compelled to confine our work to a small area, using the bacteriologists that were available in the last school month. We were fortunate in being able to secure Prof. E. Lee Treece and Mr. Bally to alternate in the work so as to keep one set of inspectors going.

Since the work had to be reduced to such an extent from our original plans, we decided to go into the territory where the larger towns were more closely situated, so as to do as much as possible in the short time. We therefore decided to go into southeast Kansas, taking the towns of Columbus, Galena, Baxter Springs, Parsons, Pittsburg, Chanute, Coffeyville and Independence. Set-ups were made at Columbus, Parsons and Independence. The other towns were worked from these stations.

Our inspectors collected samples, took temperatures, and prepared samples, after the bacteriologists were through with them, for shipment to the chemical laboratories. Chemical examinations were made by Robert H. DeRose, K. S. A. C. food laboratory, Manhattan, and to W. S. Long, K. U. food laboratory, Lawrence, Kan. The dairies reported here were inspected by Mr. O. J. Gould, of the state dairy department, Manhattan, Kan.

The report of each town was sent to the mayor or the county health officer, or both, soon after the investigation was completed, and already, in some of the towns, suitable ordinances have been passed as a result.

The tabulations herewith appended give complete information of the investigation. From this report it is evident that some of the milk is either skimmed or watered, or both, and that much of it has not been kept under proper condition, as is indicated by the high bacteria count. While more than 50 per cent of the milk samples reported show less than 100,000 bacteria per mil., there are far too many which show over 500,000, and certainly too many which show more than 1,000,000 per mil. The high counts are evidently due to one, two or all of three things, namely: Insanitary conditions at the dairy and in handling, age of the milk, or the high temperature at which the milk is kept before and during delivery. From the scores of the dairies and the temperatures shown, surely the first and third are the leading causes. After milking, milk should be quickly cooled to a temperature of 60 degrees or lower and at that temperature maintained.

COLUMBUS MILK SURVEY.

Insp. No.	Date collected, May, 1921.	Date produced, May, 1921.	DAIRYMAN.	Bacteria per cc.	Per cent fat.	Total solids.	Visible dirt.	Dairy modern?	Score of dairy.	Temperature, deg. F.
50411	4th	4th, a. m.	H. C. Poynter	2,400,000	3.9		None	No	41	68
93668	9th	9th, a. m.	H. C. Poynter	520,000	4.5		Plug lost			
50412	4th	4th, a. m.	W. W. Johnson	24,000	4.2		None	No	64	62
93669	9th	9th, a. m.	W. W. Johnson	39,000	3.9		None			
50413	4th	4th, a. m.	Elmer Larson	54,000	3.7		None	No	53	70
50414	4th	4th, a. m.	Elmer Larson	10,000	3.5		Plug lost			59
93670	9th	8th, p. m.	Elmer Larson	75,000	2.8	13.56	None			
50416	4th	3d, p. m.	Geo. W. Hawkins	7,000	4.3		None	No, but sanitary	46	
93664	9th	9th, a. m.	Geo. W. Hawkins				None			
50415 A	4th	4th, a. m.	F. S. Blincoe	15,000	4.3		None	No	55	61
50415	4th	4th, a. m.	F. S. Blincoe	30,000	3.6		None			62
93671	9th	9th, a. m.	F. S. Blincoe	13,000	3.5		Some			
93665	9th	9th, a. m.	C. C. Lopp	10,000	5.2		None			72
93729	11th	11th, a. m.	C. C. Lopp	148,000	4.1		None			
93666	9th	9th, a. m.	C. T. Borders	7,000	3.3	13.13	None			90
93667	9th	9th, a. m.	Ray H. Fuller	31,000	3.6		Little			78
93728	11th	11th, a. m.	W. D. Brocow	74,000	4.8		Little			80
93730	11th	11th, a. m.	R. H. Fuller	83,000	4.9		None			

GALENA MILK SURVEY.

Insp. No.	Date collected, May, 1921.	Date produced, May 1921.	DAIRYMAN.	Bacteria per cc.	Per cent fat.	Total solids.	Visible dirt.	Dairy modern?	Score of dairy.	Temperature, deg. F.
50420	5th	5th, a. m.	B. F. Carney	29,000	2.5	12.43		Barn, milk house and method good	61	68
93647	6th	6th, a. m.	B. F. Carney	7,600,000	2.8	12.04				68
93663	7th	7th, a. m.	B. F. Carney	46,000	2.6	12.51	None			
50419	5th	5th, a. m.	Wm. P. Sturgis	800,000	3.6		None	New dairy barn	59	64
93643	6th	6th, a. m.	Wm. P. Sturgis	49,000	3.3		None			70
93644	6th	5th, p. m.	Wm. P. Sturgis	1,000,000	3.7		None			60
93656	7th	6th, p. m.	Wm. P. Sturgis	144,000	3.3		None			
93634	6th	5th, p. m.	Scott Blick	4,320,000	3.4		None	No	52	60
93635	6th	6th, a. m.	Scott Blick	500,000	3.5		None			70
93636	6th	6th, a. m.	J. N. Gandy	2,730,000	2.7	12.03	Little	No	39	76
93637	6th	5th, p. m.	J. N. Gandy	2,640,000	2.7	12.16	Very little			60
93638	6th	6th, a. m.	Ernest and Cora Hoyes	1,890,000	3.5		Little	No	24	72
93639	6th	5th, p. m.	Ernest and Cora Hoyes	1,200,000	1.3	9.84	None			62
93648	7th	7th, a. m.	Ernest and Cora Hoyes	300,000	4.1		None			
93649	7th	6th, p. m.	Ernest and Cora Hoyes		2.3	11.20	None			
93650	7th	6th, p. m.	Ernest and Cora Hoyes		3.5					
93640	6th	6th, a. m.	Wm. Jones	5,000,000	3.6		None			70
93651	7th	7th, a. m.	Wm. Jones	32,000	4.1		None			
93641	6th	6th, a. m.	Mattie Robinson	91,000	2.7	12.21	None	No	42	74
93653	7th	7th, a. m.	Mattie Robinson	40,000	3.0					
93642	6th	6th, a. m.	C. J. Carlisle	1,190,000	2.5	12.47	Some	No	25	80
93658	7th	6th, p. m.	C. J. Carlisle	1,500,000	3.9		None			
93657	7th	7th, a. m.	C. J. Carlisle	100,000	3.7		Little			
93645	6th	6th, a. m.	W. J. Shaw	6,000	4.8		None			82
93659	7th	7th, a. m.	W. J. Shaw	3,000	4.3		None			
93646	6th	6th, a. m.	Mrs. Tom Harrison	1,690,000	4.1		Very little			78
93662	7th	7th, a. m.	Mrs. Tom Harrison	12,000	3.1		Some	No	58	
93646	6th	6th, a. m.	Mrs. Tom Harrison	1,690,000	4.1					

93652	7th	7th, a. m.	A. R. Palmer	153,000	2.9	12.60	None			80
93654	7th	7th, a. m.	B. G. Moody	67,000	3.1		Dirty	No	43	
93655	7th	7th, a. m.	Daisy and Eril Wagoner	52,000	3.7		None			70
93661	7th	7th, a. m.	Fred Fasmer	600,000	3.6		Little			
93660	7th	7th, a. m.	Scott Blick	390,000	2.5	13.56	None			

BAXTER SPRINGS MILK SURVEY.

Insp. No.	Date collected, May, 1921.	Date produced, May, 1921.	DAIRYMAN.	Bacteria per cc.	Percent fat.	Total solids.	Visible dirt.	Dairy modern?	Score of dairy.	Temperature, deg. F.
50417	5th	5th, a. m.	C. H. Gaines	600,000	3.3		Little		71	62
50418	5th	5th, a. m.	R. H. Bryant	700,000	4.4		Some	Milk house good	39	66
50421	6th	6th, a. m.	Ernest Shanks	20,000	4.2			No	25	70
50422	6th	5th, p. m.	W. L. Barnett	52,500,000	3.5			No	39	60
50423	6th	6th, a. m.	Baxter Springs, Cry	90,000	3.3					50
50424	6th	5th, p. m.	Baxter Springs, Pasteurized	5,000	3.4					50
50425	6th	6th, a. m.	Baxter Springs, Pasteurized		3.2					50
50426	6th	6th, a. m.	Karl Kain	6,000	3.6			No	64	70
50427	6th	6th, a. m.	Karl Kain	4,000	4.5					70

PITTSBURG MILK SURVEY.

Insp. No.	Date collected, May, 1921.	Date produced, May, 1921.	DAIRYMAN.	Bacteria per cc.	Per cent fat.	Total solids.	Visible dirt.	Dairy modern?	Score of dairy.	Temperature, deg. F.
93672	10th	10th, a. m.	C. T. Ready		4.5					
93696	11th	11th, a. m.	C. T. Ready		5.6					
93697	11th	11th, a. m.	C. T. Ready		4.6					
93698	11th		C. T. Ready				Little			
93699	11th		C. T. Ready				None			
93731	12th	12th, a. m.	C. T. Ready	30,000	5.2		Little			
93731 A	12th	12th, a. m.	C. T. Ready							
93731 B	12th	12th, a. m.	C. T. Ready							
93673	10th	10th, a. m.	Geo. Radell	41,000	3.5		Little	No	51	66
93674			Geo. Radell		2.8	11.76				
93675	10th		Geo. Radell		2.8	12.37				
93676	10th		Geo. Radell		2.7	11.78				
93732	12th	11th, p. m.	Geo. Radell	3,000,000	4.2		Some			63
93681	10th	9th, p. m.	B. F. Cardwell	2,000,000	3.7		None	Milk house modern; barn partly so	89	64
93682	10th	10th, a. m.	B. F. Cardwell	16,000	4.3		None			64
93736	12th		B. F. Cardwell	22,000	4.3		None			62
93737	12th		B. F. Cardwell	1,700,000	4.5		Little			64
93687	10th	10th, a. m.	Henry Schnackenberg	115,000	3.6		None	No	88	72
93719	11th		Henry Schnackenberg	115,000	3.4		Little	Clean and well ventilated		
50439	13th	13th, a. m.	Henry Schnackenberg	59,000	3.4		None			
93719	11th	11th, a. m.	Henry Schnackenberg	115,000	3.4		Little			
50437	13th	12th	Fred Frakes	660,000	3.7		Little	No	39	
93752	12th	12th, a. m.	Fred Frakes	10,000,000	3.0	12.45	Some			76
93688	10th	10th, a. m.	Fred Frakes	140,000	3.6		Little			76
93689	10th	10th, a. m.	Mundt Bros	325,000	4.1		Little			70
93690	10th	9th, p. m.	Mundt Bros	9,000,000	2.3	11.10	Very little			68
93711	11th	11th, a. m.	Mundt Bros	26,000	3.8		Little			
93712	11th	10th, p. m.	Mundt Bros	170,000	2.8	12.15	None			
50443	13th	13th, a. m.	Mundt Bros	20,000	3.5		None			
93691	10th	10th, p. m.	Geo. R. Boe	25,000,000	3.9		*			
93705	11th	10th, p. m.	Geo. R. Boe	190,000	3.0	11.59	Very little			
93706	11th	10th, p. m.	Geo. R. Boe		3.3	12.17	Very little			
93738	12th	11th, p. m.	Geo. R. Boe	165,000	2.8	11.79	None			64
50434	13th	13th, a. m.	Geo. R. Boe	560,000	3.0	13.57	None			
93739	12th	11th, p. m.	Geo. R. Boe		2.7	11.52				

* Yellowish mass, possibly cream.

PITTSBURG MILK SURVEY—CONTINUED.

Insp. No.	Date collected, May, 1921.	Date produced, May, 1921.	DAIRYMAN.	Bacteria per cc.	Per cent fat.	Total solids.	Visible dirt.	Dairy modern?	Score of dairy.	Temperature, deg. F.
93692	10th	10th, a. m.	C. H. White	7,300,000	4.2		Little			68
93724	11th	11th, a. m.	C. H. White	5,000,000	5.1		Little			
93693	10th	9th and 10th,	Modern Cedar Dairy Co	326,000	4.4		Very little			
93694	10th	9th and 10th,	Modern Cedar Dairy Co	710,000	4.5		Very little			
93695	10th		Modern Cedar Dairy Co., (Past.)	17,800,000	3.6		Very little			
93725	11th	eve.-morn. mix.	Modern Cedar Dairy Co	550,000	3.8		Some			
93727	11th		Modern Cedar Dairy Co				Some			
50435	13th	12th	Modern Cedar Dairy Co., (Past.)	1,000,000	4.1		Some			
93685	10th	10th, a. m.	Henry Jacobs	45,000	4.7		Very little	No; sanitary	74	70
93686	10th	9th, p. m.	Henry Jacobs	930,000	3.7		None			64
93703	11th	10th, p. m.	Henry Jacobs	425,000	3.7		None			
93704	11th	11th, a. m.	Henry Jacobs	6,000	4.0		None			
50438	13th	12th	Henry Jacobs	410,000	4.0		None			
93683	10th	10th, a. m.	A. C. Bitner				None			70
93684	10th	9th, p. m.	A. C. Bitner	280,000	3.9		Little			63
93700	11th	10th, p. m.	A. C. Bitner	12,000	3.8		None			
93701	11th	11th, a. m.	A. C. Bitner	4,900,000	3.8		None			
93702	11th	11th, a. m.	A. C. Bitner	146,000	3.8		None			
50442	13th	13th, a. m.	A. C. Bitner	1,800,000	4.2		None			
93679	10th	9th, p. m.	Ahrens Bros	166,000	3.4		None			62
93680	10th	10th, a. m.	Ahrens Bros	26,000	3.9		None			70
93733	12th	11th, p. m.	Ahrens Bros	730,000	3.7		Some			63
93734	12th	12th, a. m.	Ahrens Bros	31,000	3.7		Dirty			69
50441	13th	12th	Ahrens Bros	700,000	2.0	12.48	None			
93709	11th	11th, a. m.	Orvello Briggs	8,000	3.9		Dirty			
93710	11th		J. K. Eubank		3.0	12.19	Very little	Milk room is separate; sanitary	86	
93713	11th	10th, p. m.	J. K. Eubank	144,000	3.0	13.44	None		86	70
93714	11th	11th, a. m.	J. K. Eubank	300,000	3.5		None		86	70
93740	12th		J. K. Eubank	62,000	3.3	13.12	None		86	59
93741	12th		J. K. Eubank	28,000	2.0	10.89	None		86	58
93715	11th	11th, a. m.	Harry Humphries	660,000	3.1	12.60	None			64
93716	11th	11th, a. m.	Harry Humphries	3,000	3.5		None			66
93717	11th	11th, a. m.	Harry Humphries	9,000	3.5		None			68
93718	11th	10th, p. m.	Harry Humphries	5,000	2.8	12.78	None			66
93749	12th	12th, a. m.	Harry Humphries	46,000	2.6	15.04	None			
93750	12th	12th, a. m.	Harry Humphries	17,000	3.7		None			68
93751	12th	12th, a. m.	Harry Humphries	42,000	2.8	14.78	None			70

PITTSBURG MILK SURVEY—CONCLUDED.

Insp. No.	Date collected, May, 1921.	Date produced, May, 1921.	DAIRYMAN.	Bacteria per cc.	Per cent fat.	Total solids.	Visible dirt.	Dairy modern?	Score of dairy.	Temperature, deg. F.
93726	11th	11th, a. m.	James Korb	229,000	3.9		Dirty			
93756	12th	12th, a. m.	James Korb	195,000	3.1		None			82
93720	11th	11th, a. m.	E. R. McMahan	410,000	3.4		Little	No	66	67
93721	11th	11th, a. m.	E. R. McMahan	37,000	2.7	12.01	None			60
93722	11th	10th, p. m.	E. R. McMahan	2,260,000	3.9		Dirty			60–62
93723	11th	11th, a. m.	E. R. McMahan	27,000	3.4		Very little			
93742	12th	11th, p. m.	E. R. McMahan	480,000	3.5		None			59
93743	12th	12th, a. m.	E. R. McMahan	192,000	4.3		None			59
93744	12th	11th, p. m.	E. R. McMahan	5,000	3.1	14.90	None			60
93745	12th	12th, a. m.	E. R. McMahan	8,000	2.7	11.95	None			60
93746	12th	12th, a. m.	E. R. McMahan	460,000	2.9	14.78	Little			56
93747	12th	11th, p. m.	E. R. McMahan	158,000	3.7		None			60
50440	13th	13th, a. m.	E. R. McMahan	200,000	4.0		None			
93754	12th	11th, p. m.	Ed Grotheer	200,000	3.2	12.95	None	No	46	70
93755	12th	12th, a. m.	Ed Grotheer	124,000	3.5		None			
50429	13th	12th, p. m.	Ed Grotheer	3,400,000	3.3	12.83	None			
50446	13th	12th, p. m.	Ed Grotheer	39,000	3.0	12.61	None			
50447	13th	13th, a. m.	Ed Grotheer	71,000	4.6		None			
93748	12th	12th, a. m.	Mrs. F. Clothier	286,000	3.7		Dirty	No	unscored	68
93753	12th	12th, a. m.	Mrs. F. Clothier	200,000	3.6		Little			
50436	13th		Mrs. F. Clothier	58,000	3.5		Little			
93707	11th	10th, p. m.	D. M. Hanson & Sons	1,310,000	3.6		None	Modern	74	64
93708	11th	11th, a. m.	D. M. Hanson & Sons	6,000	4.0		None	Modern	74	74
93735	12th	12th, a. m.	D. M. Hanson & Sons	4,000	3.7		None	Modern	74	76
50428	13th	13th, a. m.	D. M. Hanson & Sons	10,000	3.5					
50430	13th	13th. a. m.	D. M. Hanson & Sons	2,300,000	3.7		None			
50444	13th	12th	Rev. O. Matuschka	16,000	3.2		None			
50445	13th	13th, a. m.	Rev. O. Matuschka	39,000	3.1	12.74	Little			
50431	13th	13th, a. m.	Mr. Oxford, Sweet Clover Dairy,	53,000	3.8		None			
50432	13th	12th, p. m.	Mr. Oxford, Sweet Clover Dairy,	10,000	4.1		Little			
50433	13th	13th, a. m.	H. Beswick	19,000	4.0		None			78

PARSONS MILK SURVEY.

Insp. No.	Date collected, May, 1921.	Date produced, May, 1921.	DAIRYMAN.	Bacteria per cc.	Per cent fat.	Total solids.	Visible dirt.	Dairy modern?	Score of dairy.	Temperature, deg. F.
50448	16th	16th, a. m.	W. S. Campbell	120,000	3.6		Dirty	Milk house with some modern equipment; steam boiler but not in use	47	58
50449	16th	15th, p. m.	W. S. Campbell	90,000	3.6		Little			58
50526	20th	19th, p. m.	W. S. Campbell	129,000	3.8		Some			
50525	20th	20th, a. m.	W. S. Campbell	55,000	3.6		Some			
50467	16th	16th, a. m.	J. F. Snyder	1,500,000	4.9		None			78
50465	16th	16th, a. m.	M. E. Hatchcliff	46,000	3.4	12.93	Some			78
50466	16th	15th, p. m.	M. E. Hatchcliff	1,200,000	4.1		None			78
50559	20th	20th, a. m.	M. E. Hatchcliff	500,000			Dirty			
50464	16th	16th, a. m.	Frank Peoples	17,000	4.6		Some			64
50486	17th	17th, a. m.	Frank Peoples	33,000	4.1		None			
50463	16th	16th, a. m.	A. A. Evans	50,000	2.9	12.32	None	Good milk house; well-equipped barn, not modern	69	58
50461	16th	16th, a. m.	Otto Feess	22,000	4.1		None	Modern	93	54
50462	16th	15th, p. m.	Otto Feess	160,000	3.8		None			54
50478	17th	17th, a. m.	Otto Feess	45,000			None			
50479	17th	16th, p. m.	Otto Feess	14,000	3.9		Very little			
50560	20th	20th, a. m.	Otto Feess	44,000	3.45		No test			
50459	16th	16th, a. m.	C. W. Matson	50,000	3.8		Very little			52
50460	16th	15th, p. m.	C. W. Matson		3.2	13.17	Some			52
93766	21st	21st, a. m.	C. W. Matson	57,000	4.1		Little			
93767	21st	20th, p. m.	C. W. Matson	320,000	3.3	12.32	None			
50458	16th	16th, a. m.	H. G. Parker	60,000	3.4	11.93	Dirty			54
50544	20th	20th, a. m.	H. G. Parker	41,000	3.5		Very little			
50456	16th	16th, a. m.	F. M. Oatman	20,000	4.0		Very little			49
50457	16th	15th, p. m.	F. M. Oatman	140,000	3.8		Very little			49
50476	17th	17th, a. m.	F. M. Oatman	12,000	3.7		None			
50477	17th	16th, p. m.	F. M. Oatman	1,200,000	3.6		None			
50454	16th	16th, a. m.	C. S. Wilson	3,000,000	3.7		No test made			68
50455	16th	16th, a. m.	C. S. Wilson	41,000	3.9					68
50527	20th	19th, p. m.	C. S. Wilson		4.1					
50528	20th	19th, p. m.	C. S. Wilson				Some			

PARSONS MILK SURVEY—CONTINUED.

Insp. No.	Date collected, May, 1921.	Date produced, May, 1921.	DAIRYMAN.	Bacteria per cc.	Per cent fat.	Total solids.	Visible dirt.	Dairy modern?	Score of dairy.	Temperature, deg. F.
50529	20th	20th, a. m.	C. S. Wilson		4.6					
50530	20th	20th, a. m.	C. S. Wilson				Some			
50531	20th	20th, a. m.	C. S. Wilson		3.4	12.87				
50452	16th	16th, a. m.	Price Campbell	96,000	5.3		Very little			
50453	16th	16th, a. m.	Price Campbell	26,000	4.7		None			
93762	21st	21st, a. m.	Price Campbell	40,000	4.1					
93763	21st	21st, a. m.	Price Campbell	79,000	4.1					
93764	21st	21st, a. m.	Price Campbell	117,000,000	4.1					
93772	21st	21st, a. m.	Price Campbell	75,000	4.2					
50450	16th	16th, a. m.	Frank Smith	2,000,000	2.8	13.20	None			
50451	16th	15th, p. m.	Frank Smith	25,000	3.6		None			58
93761	21st	21st, a. m.	Frank Smith	193,000	3.0	11.71	None			
50489	17th	16th, p. m.	C. J. Collins	200,000	4.0		None			58
50490	17th	17th, a. m.	C. J. Collins	21,000	4.1		None			70
50561	20th	19th, p. m.	C. J. Collins	518,000	4.0		None			
50468	17th	17th, a. m.	B. F. Rummel				Some			
50469	17th	17th, a. m.	B. F. Rummel		2.7	10.88	Some			
50470	17th	17th, a. m.	B. F. Rummel				Some			
50550	20th	20th, a. m.	B. F. Rummel							
50551	20th	20th, a. m.	B. F. Rummel		3.5		Some			
50471	17th	17th, a. m.	Geo. Van Hoorebeke		3.3	12.63	No test			
50472	17th	17th, a. m.	Geo. Van Hoorebeke		3.1	12.00	No test			
50473	17th	17th, a. m.	Geo. Van Hoorebeke		3.5		No test			
50474	17th	17th, a. m.	Geo. Van Hoorebeke				Some			
50475	17th	17th, a. m.	Geo. Van Hoorebeke		3.5					
50545	20th	20th, a. m.	Geo. Van Hoorebeke		3.3					
50546	20th	20th, a. m.	Geo. Van Hoorebeke		4.3					
50547	20th	20th, a. m.	Geo. Van Hoorebeke		3.3	12.49				
50548	20th	20th, a. m.	Geo. Van Hoorebeke		3.5					
50549	20th	20th, a. m.	Geo. Van Hoorebeke				Little			
50480	17th	17th, a. m.	M. Coffey		4.4			Does not bottle; delivers in cans; taken from cans through faucet		
50481	17th	17th, a. m.	M. Coffey		4.1					
50482	17th	17th, a. m.	M. Coffey		3.5					
50532	20th	20th, a. m.	M. Coffey		4.4					
50533	20th	20th, a. m.	M. Coffey		4.5					

PARSONS MILK SURVEY—CONTINUED.

Insp. No.	Date collected, May, 1921.	Date produced, May, 1921.	DAIRYMAN.	Bacteria per cc.	Per cent fat	Total solids.	Visible dirt.	Dairy modern?	Score of dairy.	Temperature, deg. F.
50534	20th	19th, p. m.	M. Coffey		4.3					
50535	20th	20th, a. m.	M. Coffey		3.6					
50536	20th	20th, a. m.	M. Coffey		2.8	13.71				
50537	20th	20th, a. m.	M. Coffey		2.8	12.56				
*50538	20th	19th, p. m.	M. Coffey		2.2	12.81				
50539	20th	20th, a. m.	M. Coffey				Some			
50483	17th	17th, a. m.	J. P. Halsell	450,000	2.8	12.57	None			70
50557	20th	20th, a. m.	J. P. Halsell	269,000	3.0	12.39				
93769	21st	21st, a. m.	J. P. Halsell	700,000	3.4	12.16				
50484	17th	16th, p. m.	Ray Campbell	90,000	3.3	12.98				66
50485	17th	17th, a. m.	Ray Campbell	18,000	3.6		None			74
50491	17th	17th, a. m.	Ray Campbell	40,000	3.6		Dirty			
50542	20th	20th, a. m.	Ray Campbell		4.0					
50532	20th	19th, p. m.	Ray Campbell	300,000	4.4		None			
93771	21st	21st, a. m.	Ray Campbell	74,000	3.1	12.72	None			
50488	17th	16th, p. m.	W. C. Moore		3.2	12.84				
50492	17th	17th, a. m.	S. H. White	850,000	3.6		None			50
93775	21st	21st, a. m.	S. H. White	1,300,000	3.2	12.32	None			
50493	17th	17th, a. m.	Earl Overby	35,000	3.6		None	Not entirely modern	51	
50540	20th	20th, a. m.	Earl Overby	152,000	3.5		Dirty			
50541	20th	19th, p. m.	Earl Overby	640,000	4.4		None			
50552	20th	20th, a. m.	R. F. Wilson				Little			
50553	20th	20th, a. m.	R. F. Wilson							
50554	20th	19th, p. m.	R. F. Wilson		4.2					
50555	20th	20th, a. m.	R. F. Wilson		3.5					
50556	20th	20th, a. m.	R. F. Wilson							
93774	21st	21st, a. m.	R. F. Wilson	88,000	3.8		Little			
50562	20th	20th, a. m.	M. C. Collins	160,000	3.8		None			
93757	20th	19th, p. m.	J. W. Dugger		3.5		Dirty			
93758	20th	20th, a. m.	J. W. Dugger		3.6					
93759	20th	19th, p. m.	J. W. Dugger		3.8					

* Sold as skim milk.

PARSONS MILK SURVEY—CONCLUDED.

Insp. No.	Date collected, May, 1921.	Date produced, May, 1921.	DAIRYMAN.	Bacteria per cc.	Per cent fat.	Total solids.	Visible dirt.	Dairy modern?	Score of dairy.	Temperature, deg. F.
93760	21st	21st, a. m.	Theo. Hoff		2.6	11.77				
93765	21st	21st, a. m.	B. P. Hutson	32,000	4.7		None			
93768	21st	21st, a. m.	J. W. Hall	342,000	3.2		None			
93770	21st	21st, a. m.	J. H. Atchley	11,800,000	2.9	12.26	None			
93773	21st	21st, a. m.	A. L. Aitken	58,000	3.7		Little			

Insp. No.	Date collected, May, 1921.	Date produced, May, 1921.	DAIRYMAN.	Bacteria per cc.	Per cent fat.	Total solids.	Visible dirt.	Dairy modern?	Score of dairy.*	Temperature, deg. F.
50506	17th	Pasteurized	Baker I. C. Depot	600,000	3.5		Little			56
50516 A	19th	Pasteurized								
50502	18th	18th, a. m.	W. Simon	23,000	3.6		Some			
50513	19th	19th, a. m.	W. Simon	25,000	3.0	13.06	Little			74
50496	18th	18th, a. m.	C. E. Wiltse	19,000	4.1		None			72
50497	18th	18th, a. m.	C. E. Wiltse	60,000	5.1		Very little			74
50508	19th	19th, a. m.	C. E. Wiltse		4.5		None			
50501	18th	18th, a. m.	R. D. Hagdorn	100,000	3.5		Dirty			
50511	19th	18th, p. m.	R. D. Hagdorn	150,000	3.6		None			70
50512	19th	19th, a. m.	R. D. Hagdorn		3.7		Little			
50491	18th	18th, a. m.	John Jurlow	20,000	2.6	12.01	Dirty			
50514	19th	19th, a. m.	John Jurlow	50,000	2.8	12.56	None			
50505	18th	18th, a. m.	Eugene Bush	500,000	4.3		None			
50495	18th	18th, a. m.	Eugene Bush	2,000,000	3.5		Little			70
50509	19th	19th, a. m.	Eugene Bush		3.9		None			
50510	19th	18th, p. m.	Eugene Bush	15,000	4.1		None			
50498	18th	18th, a. m.	S. Thomas	400,000	3.2	12.72	None			72
50499	18th	18th, a. m.	S. Thomas	20,000	4.7		None			74
50520	19th	19th, a. m.	S. Thomas	35,000	3.2	12.40	None			
50521	19th	19th, a. m.	S. Thomas	40,000	3.7		None			
50500	18th	18th, a. m.	Western Production Co.	800,000	3.4	13.12	Little			76
50503	18th	Pasteurized	Citti French Cry. Co.		3.6					
50522	19th	19th, a. m.	Citti French Cry. Co.		2.7	10.84				
50523	19th	19th, a. m.	Citti French Cry. Co.		2.5	11.89				
50504	18th	Pasteurized	Citti French Cry. Co.		3.3	12.90				
50507	19th	19th, a. m.	J. R. Jenkins		4.6					
50515	19th	19th, a. m.	G. E. Trembly	5,000,000	4.0		Some			72
50516 B	19th	18th, p. m.	E. S. Meyers	2,650,000	4.3		Little			73
50517	19th	19th, a. m.	E. S. Meyers	92,000	4.0		None			77
50518	19th	19th, a. m.	S. S. Bartlett	30,000	3.0	13.45	Some			75
50519	19th	19th, a. m.	J. H. Bartlett	15,000	3.0	12.80	Little			78
50524	19th	19th, a. m.	W. F. Stratton	47,000	3.6		None			

* No inspections made in Chanute.

INDEPENDENCE MILK SURVEY.

Insp. No.	Date collected, May, 1921.	Date produced, May, 1921.	DAIRYMAN.	Bacteria per cc.	Per cent fat.	Total solids.	Visible dirt.	Dairy modern?	Score of dairy.*	Temperature, deg. F.
50595	25th	25th, a. m.	H. N. Rice	20,000	3.8		None			84
50596	25th	25th, a. m.	E. A. Stark	25,000	3.3		None			80
50598	25th	25th, a. m.	F. R. Colander	480,000	4.6		None			75
50601	25th	25th, a. m.	F. R. Colander	194,000	4.8		None			
93785	26th	26th, a. m.	F. R. Colander	41,000	5.2		Very little			
93786	26th	25th, p. m.	F. R. Colander	600,000	3.7		Very little			
50599	25th	25th, a. m.	M. J. Stillwell	430,000	4.05		None			70
50600	25th	Pasteurized	Independence Cry. Co.	3,500,000	3.3		Little			
50590	25th	24th, p. m.	Independence Cry. Co.	76,000	3.25		None			62
93781	26th		Independence Cry. Co.	3,000,000	3.75		Very little			
50604	25th	25th, a. m.	Clarence Garr	380,000	3.70		Very little			
50605	25th	25th, a. m.	Chas. Overton	19,000	5.5		None			
93800	26th	26th, a. m.	Chas. Overton	79,000	3.6		Little			
50592	25th	25th, a. m.	Harry Winter	6,000	3.3		None			85
50593	25th	25th, a. m.	Harry Winter	16,000	3.6		None			86
93783	26th	26th, a. m.	Harry Winter	30,000	3.4	11.7	Little			
93784	26th	25th, p. m.	Harry Winter	44,000	4.0		Little			
50591	25th	25th, a. m.	L. C. DeMott	2,500,000	3.3		Very little			80
93811	27th	27th, a. m.	L. C. DeMott	9,000	3.8		None			
50594	25th	25th, a. m.	L. Carter	16,000	3.65		Some			80
93787	26th	26th, a. m.	L. Carter	14,000	3.8		Little			
50597	25th	25th, a. m.	F. P. Ashley	192,000	4.2		Very little			80
93797	26th	26th, a. m.	F. P. Ashley	400,000	4.1		None			
50603	25th	25th, a. m.	S. H. Dillon	720,000	3.45		Some			
93815	27th	27th, a. m.	S. H. Dillon	200,000	4.2		Little			
93799	26th	26th, a. m.	S. H. Dillon	100,000	2.7	12.26	Some			
93814	27th	26th, p. m.	S. H. Dillon	700,000	3.0		Little			66

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*Not inspected.

INDEPENDENCE MILK SURVEY—CONCLUDED.

Insp. No.	Date collected, May, 1921.	Date produced, May, 1921.	DAIRYMAN.	Bacteria per cc.	Per cent fat.	Total solids.	Visible dirt.	*Dairy modern?	Score of dairy.	Temperature, deg. F.
50606	25th	25th, a. m.	F. W. Turner	1,300,000	3.25	....	Little	....	....	59
93794	26th	26th, a. m.	F. W. Turner	1,000,000	3.8	....	Little dirt and hair,	....	....	....
93812	27th	27th, a. m.	Frank Rea	170,000	4.2	....	Some	....	....	....
93782	26th	26th, a. m.	Frank Rea	102,000	4.8	....	None	....	....	80
93788	26th	26th, a. m.	W. E. Green	27,000	3.8	....	Very little	....	....	....
93806	27th	27th, a. m.	W. E. Green	78,000	4.0	....	Some	....	....	74
93789	26th	26th, a. m.	J. W. Barnett	20,000	4.0	....	Some	....	....	....
93807	27th	27th, a. m.	J. W. Barnett	35,000	4.3	....	None	....	....	80
93790	26th	26th, a. m.	A. B. Allgood	99,000	3.5	....	None	....	....	74
93792	26th	26th, a. m.	A. E. Watts	200,000	5.0	....	Little	....	....	70
93816	27th	27th, a. m.	A. E. Watts	50,000	5.5	....	None	....	....	....
93793	26th	27th, a. m.	Chris Colonder	52,000	3.2	12.34	None	....	....	....
93818	27th	27th, a. m.	Chris Colonder	52,000	3.5	....	None	....	....	....
93798	26th	26th, a. m.	Schultz Dairy	80,000	3.9	....	None	....	....	....
93819	27th	27th, a. m.	Schultz Dairy	50,000	3.6	....	Not examined	....	....	64
93795	26th	26th, a. m.	W. J. Farley	280,000	3.8	....	None	....	....	....
93813	27th	26th, p. m.	W. J. Farley	52,000	4.3	....	None	....	....	56
93796	26th	26th, a. m.	Ed Owens	283,000	3.9	....	Some	....	....	....
93810	27th	27th, a. m.	Ed Owens	410,000	3.5	....	Little	....	....	72
93808	27th	27th, a. m.	H. M. Gates	5,000	4.6	....	None	....	....	....
93809	27th	26th, p. m.	H. M. Gates	7,000	4.0	....	Some	....	....	....

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* Not inspected.

COFFEYVILLE MILK SURVEY.

Insp. No.	Date collected, May, 1921.	Date produced, May, 1921.	DAIRYMAN.	Bacteria per cc.	Per cent fat.	Total solids.	Visible dirt.	*Dairy modern?	Score of dairy.	Temperature, deg. F.
50587	24th	24th, a. m.	W. C. Yewbanks	22,000	3.4		None			80
50619	26th	26th, a. m.	W. C. Yewbanks	117,000	4.55		Little			
50631	27th	27th, a. m.	W. C. Yewbanks	20,000	3.3		Little			
50586	24th	24th, a. m.	G. W. Morris	24,000	4.2		Little			
50580	24th	24th, a. m.	Geo. W. Morris	83,000	3.4		None			79
50581	24th	23d, p. m.	Geo. W. Morris	64,000	3.5		None			69
50614	26th	26th, a. m.	Geo. W. Morris	470,000	4.15		None			
50615	26th	25th, p. m.	Geo. W. Morris	810,000	3.3		None			
50585	24th	24th, a. m.	W. E. Brice	390,000	3.7		Some			
50618	26th	26th, a. m.	W. E. Brice	490,000	3.6		Some			
50584	24th	24th, a. m.	I. N. Long	123,000	4.6		Some			78
50617	26th	26th, a. m.	I. N. Long	330,000	4.1		Little			
50583	24th	24th, a. m.	E. W. Mock	30,000	3.8		Little			79
50623	27th	26th	E. W. Mock	1,450,000	4.2		Little			
50582	24th	24th, a. m.	O. B. Reitz	31,000	4.5		Little			74
50609	26th	26th, a. m.	O. B. Reitz	78,000	6.2		None			
50633	27th	27th, a. m.	O. B. Reitz	14,000	4.3		Little			
50579	24th	24th, a. m.	E. A. Herring	193,000	3.8		Little			90
50629	27th	27th, a. m.	E. A. Herring	30,000	4.6		Little			
50569	24th	24th, a. m.	W. A. Walborn	3,140,000	4.8		Little			78
50611	26th	26th, a. m.	W. A. Walborn	75,000	5.5		Little			
50567	24th	24th, a. m.	Earl Beeson	1,600,000	4.5		None			78
50568	24th	23d, p. m.	Earl Beeson	1,060,000	4.2		Little			66
50625	27th	26th, p. m.	Earl Beeson	80,000	3.5		Little			
50626	27th	26th, p. m.	Earl Beeson	40,000	4.2		None			
50566	24th	24th, a. m.	L. R. Jinks	18,000	4.9		Some			80
50610	26th	26th, a. m.	L. R. Jinks	26,000	4.6		Little			

*No inspections made in Coffeyville.

COFFEYVILLE MILK SURVEY—CONCLUDED.

Insp. No..	Date collected, May, 1921.	Date produced, May, 1921.	DAIRYMAN.	Bacteria per cc.	Per cent fat.	Total solids.	Visible dirt.	*Dairy modern?	Score of dairy.	Temperature, deg. F.
50565	24th	24th, a. m.	W. E. Miller & Son	239,000	4.6		None			
50616	26th	26th, a. m.	W. E. Miller & Son	97,000	4.1		None			
50564	24th	24th, a. m.	A. G. Eden	264,000	4.6		Little			78
50612	26th	26th, a. m.	A. G. Eden	940,000	4.7		Little			
50634	27th	27th, a. m.	A. G. Eden	350,000	5.5		Dirty			
50620	26th	26th, a. m.	T. C. Parent	760,000	3.8					72
50635	27th	27th, a. m.	T. C. Parent	58,000	2.9		None			
50607	26th	26th, a. m.	U. T. Dillon	12,000	3.7		Little			82
50608	26th	25th	U. T. Dillon	11,000,000	4.45		Some			58
50630	27th	27th, a. m.	U. T. Dillon	18,000	4.2		Little			
50613	26th	26th, a. m.	Roy Beeson	478,000	4.1		None			
50628	27th	27th, a. m.	Roy Beeson	28,000	3.5		Little			
50621	26th	26th, a. m.	J. A. Warren	400,000	5.0					
50632	27th	27th, a. m.	J. A. Warren	41,000	4.2		Dirty			
50624	27th	27th, a. m.	Bert Chaney	440,000	4.2		None			
50627	27th	27th, a. m.	Fitz, Wood & Harburt	50,000	3.3		Dirty			
50588	24th	24th, a. m.	Cahill & Decker	5,000	2.7		None			
50589	24th	23d, p. m.	Cahill & Decker	34,000	2.7		Little			
50622	27th	27th, a. m.	Cahill & Decker	130,000	3.0		None			73

* No inspections made in Coffeyville.

DAIRY SURVEY—SUMMARY.

CITY.	Sanitary inspection—Average score of daries.	Number of samples.	Less than 100,000 bacteria per cc.	100,000 to 500,000 per cc.	500,000 to 1,000,000 per cc.	More than 1,000,000 per cc.
			Per cent.	*Per cent.*	*Per cent.*	*Per cent.*
Columbus	51.8	15	80	13.3		6.6
Baxter Springs	47.6	8	62.5		25	12.5
Pittsburg		45	49	27	11	13
Galena	44.8	31	39	19.2	6.4	34.4
Coffeyville		46	52	33	4	11
Chanute		24	66⅔	12½	8⅓	12½
Parsons	65	45	55½	24½	9	11
Independence		49	55	27	8	10
Averages			54	24	8	14
Total number of samples		263				

Report of Public Health Laboratory for October, 1921.

Dr. Wm. Levin, Director of Laboratory.

	October.		*September.*	
1. Complement fixation test for syphilis:				
Blood specimens from physicians:				
Positive	104		49	
Negative	273		468	
Doubtful	42		43	
Unsatisfactory	8		26	
Total	——	427	——	586
Blood specimens from Lansing:				
Positive	22		17	
Negative	63		88	
Doubtful	11		13	
Unsatisfactory	3		1	
Total	——	99	——	119
Spinal fluids from physicians:				
Positive	7		5	
Negative	12		12	
Doubtful	2		5	
Total	——	21	——	22
Spinal fluids from Lansing:				
Positive	2		0	
Negative	7		3	
Total	——	9	——	3
2. Globulin test—Spinal fluids:				
Positive	26		15	
Negative	4		10	
Total	——	30	——	25
3. Examination of sputum for tubercle bacilli:				
Positive	32		18	
Negative	54		83	
Unsatisfactory	0		4	
Total	——	86	——	105
4. Examination of cultures for diphtheria bacilli:				
Positive	508		308	
Negative	2,745		944	
No growth	251		117	
Unsatisfactory	2		3	
Total	——	3,506	——	1,372
5. Examination of smears for gonococci:				
From physicians:				
Positive	4		6	
Negative	13		25	
Unsatisfactory	2		5	
Total	——	19	——	36
From Lansing:				
Positive	8		17	
Negative	86		158	
Unsatisfactory	0		7	
Total	——	94	——	182
6. Examination of blood—Widal test for typhoid:				
Positive	12		3	
Negative	36		34	
Total	——	48	——	37
7. Stool cultures for typhoid:				
Negative	6		15	
8. Miscellaneous examinations:				
Pus for tuberculosis	2		....	
Urine for tuberculosis	1		....	
Animal heads for rabies	1		....	
Blood culture	2		....	
Smears for tuberculosis	2		....	
Miscellaneous smears	3		....	
Blood smear for malaria	1		....	
Total	——	12	——	0
Total for month		4,357		2,522

LL. D.

Tommy: What does LL. D. after a man's name mean?

Limmy: I guess it means that he's a lung and liver doctor.—*Boston Transcript.*

Food Analysis LXXIII.

OCTOBER 1, 1921.

E. H. S. BAILEY, Director. W. S. LONG, Chemist in Charge.

BEVERAGES.

ALCOHOLIC BEVERAGES.

290. Home Brew. Joe Phillips, Topeka, Kan. Alcohol, 87.85 per cent. Denatured. Illegal.*
1366. Wine. From G. G. Garvin, sheriff, Anthony, Kan. Alcohol, 11.56 per cent. Made from grape juice, water and sugar. Illegal.
1382. Home Brew. Will Johns, sheriff, Lawrence, Kan. Illegal.
1383. Beverage. Will Johns, sheriff, Lawrence, Kan. Illegal.
1385. Beverage. Will Johns, sheriff, Lawrence, Kan. Alcohol, 0.2 per cent. Passed.
1386. Beverage. Will Johns, sheriff, Lawrence, Kan. Alcohol, 5.03 per cent. Illegal.
1387. Beverage. City official, Lawrence, Kan. Alcohol, 0.4 per cent. Passed.
1394. Beverage. Sheriff at Dodge City, Kan. Alcohol, 46.96 per cent. Illegal.
1394. Beverage. Sheriff at Dodge City, Kan. Alcohol, 43.30 per cent. Illegal.
1396. Beverage. Sheriff at Dodge City, Kan. Alcohol, 21.00 per cent. Illegal.
1397. Beverage. Sheriff at Dodge City, Kan. Alcohol, 44.50 per cent. Illegal.
1398. Beverage. Sheriff at Dodge City, Kan. Alcohol, 42.00 per cent. Illegal.
1399. Beverage. Sheriff at Dodge City, Kan. Alcohol, 42.50 per cent. Illegal.
1400. Beverage. Sheriff at Dodge City, Kan. Alcohol, 47.80 per cent. Illegal.
1401. Beverage. Sheriff at Dodge City, Kan. Alcohol, 44.50 per cent. Illegal.
1402. Beverage. Sheriff at Dodge City, Kan. Alcohol, 41.10 per cent. Illegal.
1403. Beverage. Sheriff at Dodge City, Kan. Alcohol, 12.80 per cent. Illegal.
1409. Beverage. Sheriff at Lawrence, Kan. Alcohol, 51.45 per cent. Illegal.
1410. Beverage. Sheriff at Lawrence, Kan. Alcohol, 19.75 per cent. Illegal.
1424. Beverage. Sheriff at Lawrence, Kan. Alcohol, 1.77 per cent. Illegal.
1425. Beverage. Sheriff at Lawrence, Kan. Alcohol, 7.55 per cent. Illegal.
1426. Beverage. Sheriff at Lawrence, Kan. Alcohol, 12.56 per cent. Illegal.
1427. Beverage. Sheriff at Lawrence, Kan. Alcohol, 10.93 per cent. Illegal.
1438. Elderberry Wine. County attorney, Eureka, Kan. Alcohol, 8.30 per cent. Illegal.
1439. Beverage. Sheriff at Olathe, Kan. Alcohol, 3.33 per cent. Illegal.
1440. Beverage. Sheriff at Olathe, Kan. Alcohol, 12.81 per cent. Illegal.
1441. Beverage. Sheriff at Olathe, Kan. Alcohol, 37.16 per cent. Illegal.
1442. Beverage. Sheriff at Olathe, Kan. Alcohol, none. Passed.
1443. Beverage. Sheriff at Olathe, Kan. Alcohol, 0.24 per cent. Passed.
1444. Beverage. Sheriff at Olathe, Kan. Alcohol, 6.85 per cent. Illegal.
1445. Home Brew. County attorney of Osage county, Kansas. Alcohol, 5.93 per cent. Illegal.
1446. Home Brew. County attorney of Osage county, Kansas. Alcohol. 5.25 per cent. Illegal.
1447. Home Brew. County attorney of Osage county, Kansas. Alcohol, 6.43 per cent. Illegal.
1448. Wine. County attorney of Osage county, Kansas. Alcohol, 8.32 per cent. Illegal.
1449. Wine. County attorney of Osage county, Kansas. Alcohol, 6.00 per cent. Illegal.

SOFT DRINKS.

417. "Orange Nip." Armour & Co., Kansas City, Mo. F. W. Woolworth & Co., Topeka, Kan. Contains added color and preservative.
417. "Wine Beere." "True Fruit Loganberry." Kansas City Kola Co.; Topeka Pure Water Co. Artificially colored and acidified with commercial acetic acid. Illegal.
22996. Soda Pop. Coco-Cola Bottling Co., Independence, Kan. Passed.
22997. Soda Pop. Coco-Cola Bottling Co., Independence, Kan. Passed.
23002. Soda Pop. Midwest Bottling and Manufacturing Co., Kansas City, Mo. Passed.
23000. Grade Soda Pop. Prairie Brew Bottling Works, Kansas City, Mo. Passed.
23004. Wineberre Pop. Midwest Bottling Works, Kansas City, Mo. Passed.
23005. Strawberry Pop. Midwest Bottling Works, Kansas City, Mo. Passed.
60819. Cider. Fleming-Wilson, Topeka, Kan. Salina Coöperative Association, Salina, Kan. Passed.
93632. Cider. The Crystal Bottling Co., Independence, Kan. C. Megredy, Independence, Kan. Contains added water. Illegal.
93842. Grape Cider. The Hamburger Co., Chicago. O. H. Oliver, Great Bend, Kan. An imitation containing artificial color and preservative. Misbranded. Illegal.
93843. Ohio Cider. The Hamburger Co., Chicago. O. H. Oliver, Great Bend, Kan. An acidified solution of sugar, artificially colored and preserved with benzoate. Illegal.
93854. Grape Soda. Lyndon Bottling Works, Lyndon, Kan. Chas. Richards, Topeka, Kan. Passed.
93855. Lemon Sour Pop. Lyndon Bottling Works, Lyndon, Kan. Chas. Richards, Topeka, Kan. Passed.

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* Samples of beverages marked illegal are so designated under the prohibitory law, since they contain more than one-half of one per cent of alcohol.

93857. Grape Soda. Val. Blatz Brew Co., Milwaukee, Wis. Hayes Produce Co., Topeka, Kan. Passed.
93853. Root Beer. Lyndon Bottling Works, Lyndon, Kan. Chas. Richards, Topeka, Kan. Passed.
93856. Root Beer. Val Blatz, Milwaukee, Wis. Hayes Produce Co., Topeka, Kan. Passed.

MILK.

1391. W. L. Metzler, Topeka, Kan. Passed.
1419. D. C. Barr, Lawrence, Kan. Passed.
1420. D. C. Barr, Lawrence, Kan. Passed.
1421. D. C. Barr, Lawrence, Kan. Passed.
1422. D. C. Barr, Lawrence, Kan. Passed.
22990. O. S. Simmons, Sterling, Kan. Passed.
22991. F. L. Matthews, Sterling, Kan. Passed.
22992. W. W. Partington, Sterling, Kan. Fat, 2.75 per cent; nonfat solids, 8 per cent. Contains added water. Illegal.
22993. W. W. Partington, Sterling, Kan. Fat, 2.195 per cent; solids not fat, 7.65 per cent. Contains added water. Illegal.
22994. C. A. Stone, Sterling, Kan. Passed.
93837. W. W. Partington, Sterling, Kan. Passed.
93838. Lena M. Snook, Sterling, Kan. Passed.
93839. C. A. Stone, Sledd's Pharmacy, Sterling, Kan. Passed.
93840. Chas. Simmons, Sterling, Kan. Passed.
93841. W. H. Sankey, Sterling, Kan. Passed.

MUSTARD.

408. A. B. S. Brand. The Symns Grocery Co., Atchison, Kan. Walter W. Dearth, Topeka, Kan. Short weight, 8.9 per cent. Excess mustard hulls. Illegal.
409. Bayle Quality. Bayle Food Products Co., St. Louis, Mo. Short weight, 4.2 per cent. Excess mustard hulls. Illegal.
410. Bayle Quality. Bayle Food Products Co., St. Louis, Mo. Passed.
22950. Gold Leaf Brand. Kuehne Bros., Topeka, Kan. Short weight, 30.3 per cent. Illegal.
22951. Gold Leaf Brand. Kuehne Bros., Topeka, Kan. Short weight, 14.3 per cent. Illegal.
22952. Horse-radish Mustard. Otto Kuehne Preserving Co., Topeka, Kan. Net weight not stated. Excess mustard hulls present. Illegal.
60801. Mustard Beach Nut Brand. Beachnut Packing Co., Rochester, N. Y. Mueller Bros., Kansas City, Kan. Doubtful.
60802. Mustard. The Twenhofel Merc. Co., Kansas City, Kan. J. Pearson, Kansas City, Kan. Product contains mustard bran and is not properly labeled. Illegal.
60804. Mustard. Heinz Brand. Heinz Vinegar Co., Pittsburgh, Pa. Graves Bros., Kansas City, Kan. Passed.
60806. Kuner Brand. Kuner Pickle Co., Brighton, Colo. Union Pacific Tea Co., Kansas City, Kan. Passed.

VINEGAR.

401. Cider Vinegar. Lux Lee Brand. Lux Merc. Co., Topeka, Kan. Kuehne Bros., Topeka, Kan. Passed.
402. Cider Vinegar. Lux Lee Brand, Lux Merc. Co., Topeka, Kan. Kuehne Bros., Topeka, Kan. Passed.
403. Cider Vinegar. Lux Lee Brand, Lux Merc. Co., Topeka, Kan. Kuehne Bros., Topeka, Kan. Passed.
404. Distilled Vinegar. Lux Brand. Lux Merc. Co., Topeka, Kan. Kuehne Bros., Topeka, Kan. Colored.
405. Cider Vinegar. Lux Brand. Lux Merc. Co., Topeka, Kan. Kuehne Bros., Topeka, Kan. Passed.
1431. Vinegar. Ozark Cider and Vinegar Co., Rogers, Ark. Low phosphate content.
22965. Vinegar. Kuehne Bros., Topeka, Kan. Leo Greenwald, Springfield, Mo. Passed.
22966. Vinegar. Kuehne Bros., Topeka, Kan. Leo Greenwald, Springfield, Mo. Passed.
22967. Vinegar. Kuehne Bros., Topeka. Leo Greenwald, Springfield, Mo. Passed.
22968. Vinegar. Kuehne Bros., Topeka. Leo Greenwald, Springfield, Mo. Passed.
22970. Vinegar. Kuehne Bros., Topeka, Kan. Leo Greenwald, Springfield, Mo. Passed.
50363. Vinegar. DeYoung & Co., Wakefield, Kan. Low phosphate content.
50364. Pure Cider Vinegar. Bittman Todd Groc. Co., Leavenworth, Kan. Geo. E. Hawes, Wakefield, Kan. Low phosphates.
50410. Vinegar. Mountain Brand. The Ozark Cider and Vinegar Co., Rogers, Ark. W. A. Dunmire, Lawrence, Kan. Substandard in phosphates.
60797. Cider Vinegar. Walker & Harris, Kansas City, Mo. K. C. Crosby, Kansas City, Kan. Positive polarization. Low phosphates. Contains glucose vinegar. Illegal.
60799. Cider Vinegar. Wil-Mar Brand. Wil-Mar Vinegar Co., Kansas City, Kan. K. C. Crosby, Kansas City, Kan. Illegal.
60803. Cider Vinegar. Twenhofel Mfg. Co., Kansas City, Kan. Illegal.
60804. Vinegar. Old Glory Brand. Emrick Vinegar Co., Kansas City, Mo. Graves Bros., Kansas City, Mo. Passed.
60807. Cider Vinegar. Union Pacific Tea Co., Kansas City, Mo. Substandard in phosphates.
60809. Cider Vinegar. York Brand. Marshall Vinegar Co., Marshalltown, Iowa. P. E. Burch, Kansas City, Kan. Passed.
60810. Cider Vinegar. Premium Brand. J. W. York, Kansas City, Kan. Substandard in phosphates.
60811. Vinegar. Poehler King. The Poehler Merc. Co., McPherson, Kan. Passed.
60812. Cider Vinegar. Punch Brand. Ridenour-Baker Grocery Co., Kansas City, Mo. Sorensen Bros., McPherson, Kan. Low in soluble phosphates. Illegal.

60813. Cider Vinegar. Poehler King Brand. Theo. Poehler Merc. Co., McPherson, Kan. Passed.

60816. Cider Vinegar. F. F. O. G. Brand. Ridenour-Baker Grocery Co., Kansas City, Mo. H. O. Hockinsmith, Salina, Kan. Low alkalinity and soluble phosphates. Illegal.

60820. Cider Vinegar. Lee Brand. H. C. Lee Merc. Co., Salina, Kan. A. Gehr, Salina, Kan. Low phosphates.

60821. Cider Vinegar. Emrick Vinegar & Pickle Co., Kansas City, Mo. Watson Durand, Salina, Kan. Passed.

60822. Vinegar. Ozark Cider & Vinegar Co., Rogers, Ark. Ryley Wilson Groc. Co., Kansas City, Mo. L. L. Hart, Bonner Springs, Kan. Substandard in phosphates.

60823. Vinegar. "Vinegar from Father's Fruit Farm." Bonner Springs, Kan. Ed Olson, Bonner Springs, Kan. Passed.

60824. Cider Vinegar. York Brand. J. H. Fulkerson, Bonner Springs, Kan. Marshall Vinegar Co., Marshalltown, Iowa. Illegal.

60825. Vinegar. Wil-Mar Brand. Wilcox & Martin, Kansas City, Kan. Emrick Vinegar Co., Kansas City, Mo. Substandard in phosphates.

60826. Vinegar. Wil-Mar Brand. Emrick Vinegar Co., Kansas City, Mo. Wilcox-Martin, Kansas City, Kan. Substandard in phosphates.

60827. Corn Sugar Vinegar. Wil-Mar Brand. Emrick Vinegar Co., Kansas City, Mo. Wilcox & Martin, Kansas City, Kan. Passed.

60828. Vinegar. Wil-Mar Brand. Emrick Vinegar Co., Kansas City, Mo. Wilcox & Martin, Kansas City, Kan. Illegal.

60829. Distilled Grain Vinegar. Wil-Mar Brand. Emrick Vinegar Co., Kansas City, Mo. Wilcox & Martin, Kansas City, Kan.

60830. Vinegar. Twenhofel Brand. Speas Vinegar Works, Kansas City, Mo. Twenhofel Mfg. Co., Kansas City, Kan. Illegal.

60831. Vinegar. Twenhofel Brand. Speas Vinegar Works, Kansas City, Mo. Twenhofel Mfg. Co., Kansas City, Kan. Illegal.

60845. Cider Vinegar. Speas Vinegar Works, Kansas City, Mo. Twenhofel Mfg. Co., Kansas City, Kan. Illegal.

60846. Cider Vinegar. Speas Vinegar Works, Kansas City, Mo. Twenhofel Mfg. Co., Kansas City, Kan. Illegal.

73049. Vinegar. Leo's All Pure Cider Vinegar, Filtered and Sterilized. The Leo-Greenwald Vinegar Co., St. Joseph, Mo. Dolan Merc. Co. Atchison, Kan. Passed.

73051. Vinegar. Stork Brand Pure Apple Cider Vinegar. Stork Mfg. Co., Atchison, Kan. Passed.

73052. Vinegar. Garvey's Pure Cider Vinegar. J. H. Garvey Co., Lincoln, Neb. Passed.

73053. Vinegar. J. M. 1946 Pure Cider Vinegar. McCord-Brady Co., Omaha, Neb. J. Bivens, Oberlin, Kan. Passed.

73059. Vinegar. Lee. Pure Cider Vinegar Sterilized and Filtered. H. D. Lee Merc. Co., Kansas City, Mo. J. C. Frewen & Son, Norcatur, Kan. Passed.

93574. Distilled Vinegar. F. W. Brand Distilled Vinegar—Color added. Distributed by Fleming-Wilson Merc. Co., Topeka, Kan.

93575. Distilled Vinegar. F. W. Brand Distilled Vinegar—Color added. Distributed by Fleming-Wilson Merc. Co., Topeka, Kan.

93580. Vinegar. Colored Distilled Vinegar. No further information supplied.

93582. Vinegar. Colored Distilled Vinegar. Sunburst Brand. Theo. Poehler Merc. Co., Lawrence, Kan.

93583. Vinegar. Poehler King Brand Sterilized Filtered Cider Vinegar. The Theo. Poehler Merc. Co., Lawrence, Kan. Substandard as to alkalinity and soluble phosphates.

93586. Vinegar. Lux Brand Pure Cider Vinegar. S. E. Lux, jr., Merc. Co., Topeka, Kan. Substandard in phosphates.

93587. Vinegar. Lux Brand Distilled Vinegar—Color added. S. E. Lux, jr., Merc. Co., Topeka, Kan.

93589. Vinegar. White Distilled Vinegar. Lux Merc. Co., Topeka, Kan. Exchange Grocery, Topeka, Kan. Passed.

93891. Vinegar. The Symns Grocery Co., Topeka, Kan. Passed.

93592. Vinegar. The Symns Grocery Co., Topeka, Kan. Passed.

93593. Vinegar. The Symns Grocery Co., Topeka, Kan. Passed.

93596. Vinegar. Jaw Hawk Brand. The Dibble Groc. Co., Topeka, Kan. McCord-Kistler Merc. Co., Topeka, Kan. Passed.

93597. Vinegar. Summer Girl Brand Pure Cider Vinegar. The H. D. Lee Merc. Co., Kansas City, Mo. Passed.

93598. Vinegar. Beech-Nut Brand Cider Vinegar. Beech-Nut Packing Co., Canajoharie, N. Y. Passed.

93599. Vinegar. Emrich's Distilled Grain Vinegar. Caramel Colored for Table Use. Emrich Vinegar & Pickle Co., Kansas City, Mo.

93600. Vinegar. Colored—Distilled. The Theo. Poehler Merc. Co., Topeka, Kan. Leo-Greenwald Vinegar Co., Topeka, Kan. Artificially colored.

93610. Vinegar. Old Glory Apple Vinegar. Emrich Vinegar & Pickle Co., Kansas City, Mo. Passed.

93622. Apple Cider Vinegar. Speas Vinegar Co., Kansas City, Mo. The Parsons Wholesale Grocery Co., Parsons, Kan. Illegal.

93623. Apple Cider Vinegar. Speas Vinegar Co., Kansas City, Mo. The Parsons Wholesale Grocery Co., Parsons, Kan. Substandard in phosphates.

93624. Distilled Sugar Vinegar. Speas Vinegar Co., Kansas City, Mo. The Parsons Wholesale Grocery Co., Parsons, Kan. Contains commercial acetic acid. Adulterated and misbranded.

83625. Vinegar. Mountain Brand. The Ozark Cider & Vinegar Co., Rogers, Ark. The Shellman Wholesale Groc. Co., Parsons, Kan. Substandard in phosphates.

93926. Apple Cider Vinegar. Ozark Cider & Vinegar Co., Rogers, Ark. The Shellman Wholesale Groc. Co., Parsons, Kan. Substandard in phosphates.

93627. Apple Cider Vinegar. Ozark Cider & Vinegar Co., Rogers, Ark. The Shellman Wholesale Groc. Co., Parsons, Kan. Substandard in phosphates.

93628. Cider Vinegar. Puck Brand. The Ridenour-Baker Groc. Co., Parsons, Kan. W. W. Tarkington, Parsons, Kan. Positive polarization. Substandard in phosphates.

93629. Vinegar. Lee Brand. The H. D. Lee Merc. Co., Kansas City, Mo. W. W. Tarkington, Parsons, Kan. Positive polarization. Substandard in phosphates.

93629½. Vinegar. Big Horn Brand. Interstate Groc. Co., Joplin, Mo. Geo. C. Snell, Parsons, Kan. Illegal.

93631. Sugar and Distilled Vinegar. Osaga Brand. The Interstate Groc. Co., Joplin, Mo. Geo. C. Snell, Parsons, Kan. Passed.

93630. Cider Vinegar. Lucania Brand. The Interstate Groc. Co., Joplin, Mo. Geo. C. Snell, Parsons, Kan. Passed.

MISCELLANEOUS.

288. Gelatin. Beatrice Creamery Co., Topeka, Kan. Passed.

291. Hamberger. Rabe Bros., Topeka, Kan. Passed.

292. Hamberger. White House Market, Topeka, Kan. Passed.

293. Hamberger. Rabe Bros., Topeka, Kan. Passed.

406. Egg Albumin. The James A. Harper Supply Co., Kansas City, Mo. Topeka Candy Kitchen. Passed.

407. Salmon. Fair Weather Brand Alaska Salmon. J. F. Roose Grocery, Topeka, Kan. Passed.

418. Catsup. Sam Cunningham, Topeka, Kan. Ridenour-Baker Groc. Co., Kansas City, Mo. Molds in 30 per cent of microscopic fields. Yeasts and spores, 50 per cent, one-sixtieth cubic centimeter. Dead bacteria, 50,000,000. Illegal.

419. Orange. "Liberty Orange," Richardson's Corporation, Rochester, N. Y. An artificially colored sugar syrup acidified with tartaric acid. Illegal.

1369. Whole Wheat Flour. State Training School, Winfield, Kan. Passed.

1370. Graham Flour. State Training School, Winfield, Kan. Passed.

1374. Catsup. Jay Hawk Brand. State Asylum for the Blind, Kansas City, Kan. McCord-Kistler Merc. Co., Topeka. Molds in 30 per cent of microscopic fields. Yeast and spores 200 per one-sixtieth cubic centimeter. Dead bacteria, 35,000,000 per cc. Illegal.

1375. Tomatoes. Honest Brand. S. G. Chamberlain Canning Co., Pierce City, Mo. Passed.

1380. Cherries. Coffeyville Mercantile Co. Passed.

1381. Flour. The Lindsborg Milling & Elevator Co., Lindsborg, Kan. Overbleached.

287. Ice Cream Powder. Kreamine Brand. Beatrice Creamery Co., Topeka, Kan. Lawrence, Kan. Passed.

1404. Candy. Lee's College Inn, Lawrence, Kan. Contains glass. Illegal.

1405. Vanilla. J. B. Dyckes, county health officer, Mankato, Kan. Poison not found. Passed.

1408. Sugar. C. A. Siscoe. Contained strychnine. Illegal.

1405A. Sugar. Santa Fe Railway, Topeka, Kan. Contains muriatic acid.

1416. Stomach contents. U. S. Health Service, Topeka, Kan. No poison found.

1417. Duodenal contents. U. S. Health Service, Topeka, Kan. No poison found.

1418. Stomach contents. N. E. George, Oxford, Kan. Contained arsenic.

1433. Disinfectant. "Ozoner Odeless." Available chlorine, 0.1 per cent.

1434. Health Food. Mrs. A. E. Nuttle, Wichita, Kan. Contained some fine sand.

1435. Canned Tomatoes. Herbert L. Coulter, Cherryvale, Kan. Sterile. No poison found. Passed.

1450. Water. Porter Brown, M. D., Alton, Kan. No poison found.

1453. Cocoanut. F. E. Rowland, Topeka, Kan. Passed.

22905. Powdered Lemon Juice. California Brand Powdered Lemon Juice. "Contains the Juice of about 24 Lemons." Merrell-Soule Co., Syracuse, N. Y. A mixture of dextrin, citric acid and sugar. Illegal.

22949. Bran. Mrs. Albert Tucker, Altoona, Kan. Passed.

22948. Pie Filling, "Goodrich Lemon Pie Filling." G. A. Goodrich Co. A mixture of starch, dextrin, tartaric acid and artificial color. Illegal.

22955. Honey. F. E. Rowland, Topeka, Kan. Passed.

22956. Jelly. Derby Brand. Apple-Grape Jelly with one-tenth of one per cent tartaric acid. Glaser, Crandell Co., Chicago. Passed.

22957. Jelly. Pure Fruit Jelly, Derby Brand. Apple and Raspberry. Prepared with tartaric acid. Glaser, Crandell Co., Chicago. Passed.

22958. Preserves. Pure Fruit Preserves, Derby Brand. Apple Juice, Peach, Sugar. Insufficient fruit present. Illegal.

22960. Preserves. Pure Fruit Preserves, Derby Brand. Apple Juice, Pineapple, Sugar. Insufficient fruit present. Illegal.

22962. Preserves. Gold Leaf Brand. Kuehne Bros., Topeka, Kan. Apple and Strawberry Preserves. Insufficient fruit present. Illegal.

22976. Lard. F. E. Rowland, Topeka, Kan. Contains cottonseed product. Illegal.

22979. Sugar. F. E. Rowland, Topeka, Kan. Passed.

93618. "Seasonine." The Prise-Valine Mfg. Co., Brooklyn, N. Y. Ellege & Son, Parsons, Kan. A mixture of salt, sugar, pepper.

93835. "Cold Storine." B. Heller & Co., Chicago. Peoples' Coöperative Association, Chanute, Kan. Common salt.

93801. Apples. Arkmo Brand. Gray's Grocery, Coffeyville, Kan. Contents advertised one gallon; actual contents three quarts.

93802. Syrup. R. D. Andrews, Coffeyville, Kan. Advertised and sold as one gallon; actual contents about three quarts.

93803. Peaches. Coffeyville Coöperative Association, Coffeyville, Kan. Advertised and sold as one gallon; actual contents about three quarts.

93804. Apples. Huggins & Son, Coffeyville, Kan. Advertised and sold as one gallon; actual contents about three quarts.
93805. Peaches. Austin & Keeler, Coffeyville, Kan. Advertised and sold as one gallon; actual contents about three quarts.
93844. Cinnamon Rolls. Henry Schuh, Hutchinson, Kan. Colored with napthol yellow. Illegal.
93845. Butter Rolls. Henry Schuh, Hutchinson, Kan. Colored with napthol yellow. Illegal.
93852. Tomato Catsup. Jay Hawk Brand. The McCord-Kistler Merc. Co., Topeka, Kan. The Pacota Packing Co., Indianapolis, Ind. Passed.

Report of Division of Water and Sewage, October, 1921.

Albert H. Jewell, Chief Engineer.

Permits Issued or Refused for Waterworks and Sewerage.

Date.	*Place.*	*Nature of improvement.*
Oct. 6	Olathe	Sewer extensions.
Oct. 18	Parsons	Improvement to pipe line.
Oct. 28	Victoria	Revision of No. 996.

Inspections Made.

Date.	*Place.*	*Nature of improvement.*
Oct. 7	Newman	Drainage investigation.
Oct. 20	Atchison	Intake investigation; special water supply.
Oct. 25	Stockton	Final sewer inspection; inspection of water plant.
Oct. 26	Alton	Waterworks inspection.
Oct. 26	Tipton	Waterworks inspection.
Oct. 26	Osborne	Inspection of partly completed filter plant.
Oct. 27	Salina	Stream pollution.
Oct. 27	Downs	Inspection of city water supply, Missouri Pacific; private water supply; city disposal plant.
Oct. 27	Kirwin	Water supply.
Oct. 27	Logan	Water supply.
Oct. 28	Almena	Water supply.
Oct. 28	Norton	Water supply; sewage disposal.
Oct. 28	Phillipsburg	Water supply.

Plans or preliminary reports have been received, or conferences have been held with municipal authorities for new work at the following places:

Centralia	Water supply and sewerage.
Colony	Water supply and sewerage.
Conway Springs	Sewerage.
Emporia	Sewage disposal.
Herington	Water improvement.
Highland	Water improvement.
Howard	Water filtration and sewerage.
Lawrence	Water improvement.
Manhattan	Water softening.
Marion	Water filtration.
McPherson	Water improvement.
Moline	Sewerage.
Sterling	Sewerage.
Topeka	State Hospital; water improvement.
Utica	Water supply.
Valley Falls	Additional water supply.
Wathena	Water supply and sewerage.
Lawrence	Municipal swimming pool.
Elgin	Waterworks and sewerage.
Parsons	Water filtration.
Neodesha	Water purification improvements.
Abilene	Sewer extensions.

Record of analyses made in Water and Sewage Laboratory at Lawrence during the month of October, 1921:

	Bact.	*Chemical.*	*Miscel.*
City supply	502	10	..
Bottled waters	4	..	..
Private supplies	47	..	..
Railroad supplies	2	..	..
Ice supplies	2	..	..
Sand	..	..	13
Chlorides	..	..	2
Miscellaneous	80	..	..
Algæ	..	..	2
Totals	637	10	17—664

Licenses Issued.

Date.	*Place.*	*Person or firm and purpose.*
Oct. 27....	Atchison	Santa Fe. City supply.
Oct. 27....	Atchison	Burlington. City supply.
Oct. 27....	Atchison	Missouri Pacific. City supply.
Oct. 27....	Burlington	Santa Fe. City supply.
Oct. 27....	Cedar Vale	Santa Fe; hauled from Independence.
Oct. 27....	Chanute	Santa Fe. City supply.
Oct. 27....	Great Bend	Santa Fe. City supply.
Oct. 27....	Highland	Grand Island. City supply.
Oct. 27....	Highland	Union Pacific. City supply.
Oct. 27....	Independence	Santa Fe. City supply.
Oct. 27....	Independence	Missouri Pacific. City supply.
Oct. 27....	Junction City	M K & T. City supply.
Oct. 27....	Junction City	Union Pacific. City supply.
Oct. 27....	Pratt	Anthony & Northern. City supply.
Oct. 27....	Pratt	Santa Fe. City supply.
Oct. 27....	Pratt	Rock Island. City supply.
Oct. 27....	Pratt	Wichita Northwestern. City supply.
Oct. 11....	Norwich	Coöperative Dairy Products Co. Manufactured ice.
Oct. 17....	Wichita	Viola Springs Water Co. Bottled water.

A Brief History of Vaccination.

FRANK G. PEDLEY, M. D.

The exceeding mildness of smallpox lately has caused many people to be careless of the vaccination of their children. This is a great mistake, since vaccination in childhood is practically never anything but a most benign procedure, and undoubtedly furnishes some if not a complete protection for many years. Certainly it will protect for at least five years. This short-sighted policy of neglecting vaccination has led to the destruction of one hundred people or more in Kansas City and to the disfiguring of several hundred more. In Kansas we look with fear on the malignant disease in Kansas City, but there is no need whatever to fear it, since vaccination will completely protect.

Edward Jenner introduced the method of vaccination in 1796, but hundreds of years before his time another prophylactic method was extensively practiced. This consisted in actually inoculating smallpox into the body, for it was found that by so causing smallpox the disease was usually milder than when acquired in the natural way.

In India the practice of inoculating smallpox in order to produce a mild form of the disease was practiced in very ancient times. The inoculation was performed by a particular tribe of the Brahmins. This tribe sent out small parties of three or four each year a few weeks before the expected return of the disease. Inhabitants of the various villages, knowing the time when these Brahmins would come, prepared themselves for inoculation by undergoing a strict dietary regimen. The inoculation was performed in very much the same way as vaccination now is, but with the material which had been obtained from inoculated smallpox pustules of the year before.

In China they practiced a curious custom of inoculating in the nose. This was done by placing a pledget soaked with variolous material into the nostril. It can be easily imagined how painful a condition arose when the inoculation was successful. Not only that, but the patient frequently breathed the material into his lungs and came down with natural smallpox.

In Africa it was the custom for those wishing to have their children inoculated with smallpox to carry them to one ill with the disease and to obtain the material from one of his pustules. This was called "buying the smallpox," since it was the custom to give to the donor of the smallpox material a sum of money; in fact, there was a superstition that if no money changed hands the inoculation would not be successful.

In 1717, eighty years before the introduction of vaccination, Lady Mary Wortley Montagu, whose husband was the British ambassador to Turkey, wrote home as follows:

> "The smallpox, so fatal and so general among us, is here entirely harmless by the invention of ingrafting, which is the term they give it. There is a set of old women who make it their business to perform the operation every autumn in the month of September, when the great heat is abated. People send to one another to know if any of their family has a mind to have the smallpox. . . . Every year thousands undergo this operation, and the French ambassador says, pleasantly, that they take the smallpox here by way of diversion, as they take the waters in other countries."

It was through Lady Montagu, therefore, that the inoculation of smallpox was introduced into England. It, however, gained little popularity there for some time.

In 1721 smallpox visited America for the first time, after an absence, it is said, of nineteen years. An account of the Turkish or Byzantine method of preventing the disease was sent to the practitioners of Boston, and Dr. Zabdiel Boylston was induced to inoculate 244 persons. Six of these people died. Public opinion accordingly waxed rather strong against this method, but in 1754, when smallpox again visited Boston, 3,000 people were successfully inoculated.

Though this practice of inoculation found little favor in England at first, in the course of a few years it became very popular. There were, of course, a great many people who objected to it, and undoubtedly it was a very dangerous procedure. In the hands of some inoculators one person in fifty died. In other hands the percentage was less. The mortality from the disease contracted in the natural way, however, was so high (probably 30 per cent), and so common was the disease, that people were prepared to take the risk of inoculation to be saved from the greater risk of contracting the disease naturally. It is interesting to note that the 30 per cent mortality, which the disease in the eighteenth century was said to produce, corresponds very closely with the mortality in the present epidemic in Kansas City. We have no reason for supposing that the mild form of smallpox which we have been accustomed to for the last twenty years will continue to prevail, and epidemics such as the present one in Kansas City only serve to remind us that the old-fashioned type of smallpox may break out at any time.

A number of surgeons attained temporary fame in England about 1750 as inoculators. The most famous of these was a Mr. Sutton and a Doctor Dimsdale. This latter physician attained such proficiency in the art that he was invited to go to Russia to inoculate the empress. He accepted this invitation with some trepidation. Everything came out so successfully, however, that the grand duke, having watched the effect upon his wife, submitted his royal person to the hands of Doctor Dimsdale. He too was successfully inoculated, and for this doubly happy result Dimsdale was awarded the sum of 10,000 pounds and an annuity of 500 pounds.

Thirty years after the inoculation of the Russian empress, Edward Jenner published his famous "Inquiry," in which he put forward the view that the inoculation of vaccinia, or cowpox, would render a person immune to smallpox. This idea was not original with Jenner; it was, in fact, quite an old tradition in Gloucestershire, and some fifteen years before Jenner performed his first experiment a farmer named Jesty had inoculated his wife and children with cowpox in order to prevent them having smallpox, but Jenner placed the thing on a scientific foundation. His first experiment was on a boy named Phipps. In 1796 he vaccinated the boy with cowpox, and some months later endeavored to produce smallpox in the same boy by the old-fashioned method. This was a complete failure. Several similar experiments were tried with the same result, and it became apparent to Jenner that the Gloucestershire tradition was indeed a fact. Jenner sent an account of his discovery to the Royal Society, and it was promptly returned to him with the advice not to proceed further with the matter, since it would impair his already established credit. This turn of affairs was quite unexpected and might have discouraged a less determined character. Jenner, however, resolved to publish the experiments at his own expense, and did so in 1798. It was to be expected that the discovery would meet with a great deal of incredulity, and indeed a storm of criticism quickly broke over Jenner's head. Two doctors, however, at the smallpox hospital in London, Doctors Pearson and Woodville, started energetically to investigate Jenner's statements. Their energies were at first of necessity curbed by the difficulty of obtaining cowpox material. Soon an epidemic of cowpox occurred in London, however, and these men hastened to secure material for inoculation. In two months they vaccinated 160 persons. They attempted to produce smallpox in sixty of these later on, but none contracted the disease. These experiments pretty well established Jenner's claims. A royal Jennerian institution was founded, under the patronage of the queen, and Jenner was made president.

One finds in every country people who constantly oppose orthodox views and ideas. Accordingly an antivaccinist party arose. Jenner was, of course, altogether too dogmatic in his claim for vaccination. He had no authority, for example, to state that vaccination would protect an individual for life, nor did his meager statistics warrant his claim for an invariable protection. The past 130 years have given us a true idea of vaccination. We know now that vaccination affords complete immunity in probably 98 per cent of people for from five to seven years. We also know that if the disease is contracted later on it is almost invariably in a mild form and is practically never fatal.

The knowledge we now possess has been acquired through many mistakes. It is unfortunately true that the crude methods of the first half of the nineteenth century resulted in many accidents. Syphilis, for example, has probably been occasionally inoculated with the cowpox. These accidents were largely due to the method of obtaining the cowpox material from the inoculated pustule in man instead of from the cow. This practice has been forbidden by law, and there is now no danger whatever of syphilis being caused by vaccination, since all the vaccine lymph is obtained from cattle, who never suffer from syphilis. Furthermore, the method of preserving the vaccine virus in glycerine has rendered blood poisoning impossible, since the glycerine kills off the germs which cause blood poisoning, but does not kill the vaccine virus.

When we realize that 150 years ago people submitted themselves to the inoculation of smallpox in order to protect themselves against future attacks, it seems ridiculous that any one should raise a fuss over the comparatively mild procedure of vaccination. Yet there is quite a large antivaccinist party. The claims of this party are largely founded upon ignorance and prejudice. Many of the statements are partial truths or deliberate untruths, and so great is the rancor of some of its members that they portray Jenner as a human monster.

The responsibility for the existence of smallpox rests with the unvaccinated population. With everybody vaccinated, smallpox would undoubtedly cease to exist, as was prophesied by Jefferson a hundred years ago.

Smallpox.

In his History of England, Macaulay described smallpox as "the most terrible of all the ministers of death. The havoc of the plague," he continues, "was far more rapid, but the plague visited our shores only once or twice within living memory, and the smallpox was always present, filling the churchyards with corpses, tormenting with constant fears all whom it had not yet stricken, leaving on those whose lives it spared the hideous traces of its power, turning the babe into a changeling at which the mother shuddered, and making the eyes and cheeks of the betrothed maiden objects of horror to the lover."

One hundred and twenty-five years have elapsed since the first vaccination was performed by Edward Jenner in 1796. Persons living to-day, when the great menace that once conquered even America is no longer feared, can scarcely appreciate the true significance of the tribute which Thomas Jefferson paid to Jenner, in these words: "You have erased from the calendar of human afflictions one of its greatest. Yours is the comfortable reflection that mankind can never forget that you have lived; future nations will know by history only that the loathsome smallpox has existed, and by you has been extirpated."

In the light of these comments it seems almost incredible that the United States Public Health Service should find it possible to report more than 16,000 cases of smallpox in eight states alone in which the histories were furnished in 1920; while from information supplied by only seven states, more than 18,000 cases have been reported, with history, during the first six months of the present year. In Minnesota, for example, 8,238 of these smallpox cases were actually reported. The real lesson, however, is to be found in the statistics of vaccination for this formidable array of patients. More than two-thirds of the entire 34,000 afflicted had never been successfully vaccinated. About one-twentieth of them had been vaccinated more than seven years before the attack, and of the remainder the histories were in most cases uncertain with reference to their vaccination status, or were not obtained. Only 2 per cent of the patients were actually reported to have been vaccinated within seven years prior to the attack. Again the lesson to the public is clear and imperative, and there is little left for the consolation of the antivaccination cult, which is doubtless responsible, directly or indirectly, for some of this unnecessary suffering.—*Journal American Medical Association.*

A Laboratory for Kansas Physicians.

WILLIAM LEVIN, Dr. P. H., Director of Laboratories.

The early recognition of disease is the basis of all preventive medicine. In the Public Health Laboratory of the State Board of Health facilities are at your disposal for rapid and accurate diagnosis of those diseases which affect the public health, particularly infectious or communicable diseases.

The laboratory is a fundamental and essential aid in public-health work because accurate methods of analysis are used and definitely significant facts are elicited by them. You must bear in mind, however, that laboratory findings are based upon the individual specimen and not upon the clinical history of the patient. A broad view, therefore, of all the ascertainable facts in your case must guide you in applying the findings of the laboratory to your preventive and curative measures.

The Public Health Laboratory desires your hearty coöperation in order that its service can be most effectively developed. This is *your* laboratory. Use it. Correlate its findings with your clinical examination, and you and your patient both will profit by it.

Do not overlook the fact that the activities of the state laboratory are dependent largely upon postal, telegraph and transportation services. The quicker your specimen arrives the better the material is for examination and the shorter is the time in which you receive the report. At your request a telegraphic report of any laboratory examination will be made you, at your expense.

The laboratory provides containers for the collection of material and desires that they be used at all times. Containers and instructions for the preparation and shipment of specimens will be sent you upon request.

The following examinations and tests are now made in this laboratory:

1. Examination for diphtheria bacilli.
2. Examination for the organisms of Vincent's angina.
3. Examination for meningococcus.
4. Examination for streptococcus hemolyticus.
5. Examination of sputum for the tubercle bacillus.
6. Examination of feces for enteric organisms (typhoid, paratyphoid, and dysentery).
7. Examination of urine for the tubercle bacillus and for enteric organisms.
8. Examination of blood for malaria and for pathogenic bacteria.
9. Complement fixation test (Wassermann) for syphilis.
10. The Widal reaction for typhoid and paratyphoid fever.
11. Examination of smears for gonococcus.
12. Dark-field examination for the spirochete of syphilis (*Spirocheta pallida.*)
13. Examination of cerebrospinal fluid for organisms, globulin content, and the Wassermann test.
14. Examination for parasites (blood, intestinal, etc.).
15. Miscellaneous examinations related to public-health problems.

Constructive criticism and suggestions for improvement will be gladly accepted at all times. The methods and technique used in this laboratory are standard. Each test is carefully controlled. A report from this laboratory, whether negative or positive, is based upon accurate findings after thorough and careful examination.

Requests for information and for containers should be sent to the Public Health Laboratory, Washburn College, Topeka, Kan.

KANSAS PUBLIC HEALTH ASSOCIATION

HEALTH FIRST

I Believe

In Health
In Fresh Air
In Preventing Disease

I Agree

To keep some windows open in my home, day and night, summer and winter.

To keep my body in good general condition by eating simple, wholesome food.

To take plenty of sleep and rest.

To avoid spitting on sidewalks or floors, because disease is spread by spitting.

To get all the fresh air and sunshine and outdoor life that I can.

To give support and encouragement to Health Officials, whose business it is to protect our most precious asset—**Health.**

To enroll as a member of the Kansas Public Health Association.

(Signed).. of

(P. O. Address)...

....

Age (if below 21)........... Date..................................

Return this card to Kansas Public Health Association, 602 Mills Bldg., Topeka, Kan.

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BULLETIN

OF THE

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S. J. CRUMBINE, M.D., Editor.

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Let's do it better in 1922!

The properly functioning full-time health organization will reduce the death rate.

A meeting of all medical laboratory workers is called for January 27, at Topeka.

Every death from smallpox in the Kansas City epidemic was of persons who were unvaccinated.

Periodical medical examination in a group of 6,000 for a period of 5½ years reduced the expected mortality 28 per cent. The moral is self-evident.

Are you going?

Where?

To the Public Health Institute.

Yes!

When and where is it to be held?

At Kansas City, Kan., April 10 to 15, inclusive.

Perpetual devotion to what a man calls his business is only to be sustained by perpetual neglect of many other things. And it is not by any means certain that a man's business is the most important thing he has to do.—*Stevenson.*

MORBIDITY REPORT FOR NOVEMBER, 1921.

COUNTIES AND CITIES.	Tuberculosis	Typhoid and Paratyphoid	Smallpox	Diphtheria	Influenza	Scarlet Fever	Measles (morbilli)	German Measles (rubella)	Whooping Cough	Chickenpox	Mumps	Pneumonia (acute) (all forms)	Meningitis (epidemic)	Poliomyelitis (epidemic)	Other Diseases (see Addenda)
THE STATE	190	39	213	1777	14	1114	31	3	65	290	98	79	0	9	277
Allen, except	12	0	6	38	0	15	1	0	0	0	0	0	0	0	0
Iola	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Anderson	1	0	2	29	0	10	1	0	0	0	0	0	0	0	1
Atchison, except	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
Atchison city	1	0	0	†31	0	5	0	0	0	0	0	0	0	0	0
Barber	3	1	0	0	0	9	0	0	0	0	0	0	0	0	0
Barton, except	0	0	7	1	0	9	0	0	0	4	0	2	0	0	0
Great Bend	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bourbon, except	0	0	0	39	0	6	0	0	0	0	0	2	0	0	0
Fort Scott	2	0	0	45	0	6	0	0	0	0	0	1	0	0	10
Brown	2	0	0	7	0	13	0	0	0	1	0	0	0	0	0
Butler, except	2	4	5	†94	1	12	2	0	0	4	0	2	0	0	0
Augusta	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
El Dorado	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chase	1	0	0	1	0	6	0	0	0	1	0	0	0	0	0
Chautauqua*	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cherokee except	2	0	2	33	0	7	0	0	0	13	0	2	0	0	9
Galena	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cheyenne	0	0	0	1	0	7	0	0	0	0	0	0	0	0	2
Clark	0	0	0	5	0	1	0	0	0	5	0	0	0	0	0
Clay	1	0	0	3	0	13	1	0	0	2	0	0	0	0	0
Cloud, except	1	0	1	3	0	24	1	0	0	9	0	1	0	0	2
Concordia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coffey	1	1	0	12	0	7	0	0	0	0	0	0	0	0	0
Comanche	0	0	0	5	0	7	1	0	0	0	0	0	0	0	0
Cowley, except	8	0	1	35	3	24	2	0	11	7	0	3	0	0	3
Arkansas City	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Winfield	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crawford, except	2	2	2	27	3	15	0	0	1	0	0	0	0	0	1
Pittsburg	1	2	0	34	0	8	0	0	0	0	0	0	0	0	2
Decatur	1	2	0	2	0	3	0	0	0	0	0	0	0	0	0
Dickinson	2	0	0	1	0	30	0	0	0	2	0	0	0	0	0
Doniphan	4	0	0	2	0	9	0	0	0	1	0	0	0	0	1
Douglas, except	2	0	0	4	0	2	0	0	0	1	0	0	0	0	0
Lawrence	10	0	0	9	0	12	1	0	0	2	0	0	0	0	7
Edwards	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Elk	1	0	0	2	0	1	0	0	0	4	0	0	0	0	0
Ellis	0	1	0	3	0	6	0	0	0	9	0	0	0	0	4
Ellsworth	0	0	0	0	0	2	0	0	0	0	0	1	0	0	2
Finney	0	0	0	5	0	2	0	0	0	1	0	4	0	0	0
Ford, except	12	0	2	14	0	13	0	0	2	8	0	1	0	0	0
Dodge City	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Franklin, except	1	0	0	22	0	10	0	0	0	4	0	1	0	1	2
Ottawa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Geary, except	1	0	0	2	0	3	2	2	0	36	0	1	0	0	4
Junction City	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gove	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0
Graham	0	0	0	10	0	4	0	0	0	0	0	1	0	0	0
Grant*	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Gray	0	0	0	7	0	2	0	0	0	4	3	1	0	0	1
Greeley	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Greenwood	0	1	5	39	0	9	1	0	14	6	0	5	0	3	0
Hamilton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Harper	0	2	0	20	0	8	0	0	0	2	0	1	0	0	3
Harvey, except	0	0	0	7	0	19	0	0	0	0	0	0	0	0	0
Newton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Haskell	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
Hodgeman	0	0	0	1	0	2	0	0	0	0	0	0	0	0	0
Jackson	1	0	1	2	0	2	0	0	1	0	0	0	0	0	1
Jefferson	1	0	0	15	0	25	0	0	0	7	0	0	0	0	0
Jewell	0	0	2	7	0	43	0	0	0	0	0	0	0	0	0
Johnson	0	0	3	16	0	16	1	0	0	0	0	0	0	0	0
Kearny	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0
Kingman	2	0	0	4	0	7	0	0	0	0	0	1	0	0	0
Kiowa	1	0	0	1	0	15	0	0	1	0	0	0	0	0	1
Labette, except	0	0	2	32	0	7	0	0	0	0	0	0	0	0	20
Parsons	3	0	0	9	0	8	0	0	1	0	0	0	0	0	4
Lane	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0
Leavenworth, except	0	3	0	7	0	7	0	0	0	1	0	1	0	0	0
Leavenworth city	1	0	1	21	0	6	0	0	0	3	0	0	0	0	2

MORBIDITY REPORT FOR NOVEMBER, 1921—Concluded.

COUNTIES AND CITIES.	Tuberculosis	Typhoid and Paratyphoid	Smallpox	Diphtheria	Influenza	Scarlet Fever	Measles (morbilli)	German Measles (rubella)	Whooping Cough	Chickenpox	Mumps	Pneumonia (acute) (all forms)	Meningitis (epidemic)	Poliomyelitis (epidemic.)	Other Diseases (see Addenda)
Lincoln	0	0	1	5	0	5	1	0	0	0	0	0	0	0	1
Linn	0	0	4	32	0	23	0	0	0	0	0	0	0	0	0
Logan	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Lyon, except	20	0	0	37	0	11	0	0	0	0	0	1	0	0	2
Emporia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Marion	1	0	0	†63	0	23	1	0	0	1	0	0	0	0	4
Marshall	0	1	2	10	0	29	2	0	2	1	0	0	0	0	0
McPherson	0	0	1	0	0	7	0	0	0	2	1	0	0	1	0
Meade	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Miami	4	0	0	29	1	16	0	0	0	0	0	0	0	0	0
Mitchell	0	0	1	1	0	12	0	0	0	0	0	1	0	0	0
Montgomery, except	6	0	0	46	2	15	0	0	0	2	0	2	0	0	0
Coffeyville	14	1	0	27	0	4	0	0	0	0	0	2	0	0	3
Independence	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Morris	0	0	0	22	0	19	0	0	0	0	0	0	0	0	0
Morton	0	0	0	0	0	5	0	0	0	0	0	0	0	0	1
Nemaha	2	0	0	8	0	11	0	0	0	0	0	0	0	0	0
Neosho, except	6	0	2	18	0	11	0	0	0	2	0	1	0	0	1
Chanute	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ness	0	0	0	2	0	4	0	0	0	0	2	1	0	0	0
Norton	8	5	0	3	0	7	0	0	0	4	0	0	0	0	0
Osage	1	1	0	9	0	2	0	0	0	2	0	0	0	0	1
Osborne	1	0	1	2	0	23	0	0	0	0	0	0	0	0	0
Ottawa	0	0	0	6	0	8	0	0	2	17	0	0	0	0	0
Pawnee	0	0	0	4	0	13	0	0	0	0	0	2	0	0	0
Phillips	0	0	0	2	0	31	0	0	0	1	0	0	0	0	0
Pottawatomie	0	0	0	1	0	2	0	0	0	2	0	0	0	0	0
Pratt	1	1	0	17	0	10	1	0	0	0	0	0	0	0	0
Rawlins	1	0	0	1	0	12	0	0	0	0	0	0	0	0	0
Reno, except	0	0	5	5	0	9	0	0	0	0	0	0	0	0	0
Hutchinson	3	0	27	62	0	16	1	0	0	1	0	1	0	0	3
Republic	0	2	0	18	1	5	0	0	0	0	0	3	0	0	1
Rice	1	0	0	12	0	9	0	0	0	0	0	3	0	0	0
Riley, except	1	2	0	2	0	3	3	0	0	6	0	2	0	0	0
Manhattan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rooks	1	0	2	10	0	14	2	0	0	0	0	0	0	0	0
Rush	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Russell	0	0	0	8	0	13	0	0	0	0	0	0	0	0	0
Saline, except	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Salina	0	0	2	10	0	3	0	0	0	6	0	0	0	0	0
Scott	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
Sedgwick, except	0	0	0	5	0	7	0	0	0	1	0	0	0	0	0
Wichita	6	1	3	†121	0	110	0	0	22	13	1	3	0	0	50
Seward	0	0	0	2	0	3	0	0	0	0	0	0	0	0	1
Shawnee, except	1	0	0	44	0	4	0	0	0	6	0	0	0	0	0
Topeka	16	2	3	†189	1	20	1	0	1	35	0	9	0	2	32
Sheridan	0	0	0	0	0	9	0	0	0	0	0	3	0	0	8
Sherman	1	0	0	0	0	8	0	0	0	0	0	1	0	1	0
Smith	0	0	6	0	0	4	1	0	0	0	0	0	0	0	0
Stafford	1	0	0	7	0	5	0	0	0	0	0	0	0	0	0
Stanton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stevens	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sumner, except	2	0	1	42	0	24	1	1	5	9	91	1	0	0	0
Wellington	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Thomas	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Trego	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0
Wabaunsee	0	0	71	26	0	3	0	0	1	0	0	0	0	0	0
Wallace	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Washington	1	0	0	8	0	8	0	0	0	0	0	0	0	0	0
Wichita	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wilson	0	0	2	40	0	11	0	0	0	0	0	1	0	0	0
Woodson	0	0	0	24	2	10	0	0	0	0	0	0	0	0	0
Wyandotte, except	2	0	0	6	0	3	1	0	0	1	0	0	0	1	0
Kansas City	5	3	37	71	0	23	2	0	1	40	0	11	0	0	39
Rosedale	0	0	0	0	0	0	0	0	0	0	0	0	0	0	44

* Delinquent.

† Diphtheria carriers: Atchison city, 14; Butler, 3; Marion, 43; Wichita, 28; Topeka, 14.

Other communicable diseases: Malaria, 1; erysipelas, 11; cancer, 28; trachoma, 2; gonorrhœa, 120; syphilis, 110; septic sore throat, 2; chancroid, 1; meningo-encepalitis, 1; pellagra, 1.

Public-health Institute and School for Health Officers and Public-health Nurses.

The United States Public Health Service, collaborating with the Kansas State Board of Health, will hold a one week's public-health institute at Kansas City, Kan., April 10 to 15, inclusive.

The sessions will be held in the rooms of the Chamber of Commerce at 727 Minnesota avenue.

The course is entirely free to any person sufficiently interested in personal and public health to attend.

A staff of instructors of national reputation has been secured, and it is already guaranteed to be the greatest school for personal and public-health instruction ever conducted in the Middle West. Physicians, health officers, public-health nurses and social workers are especially invited to attend the entire course of lectures and demonstrations. The complete program will be published in the next issue of the BULLETIN.

A Phenomenal—Future Historic—Faker.

By Prof. L. E. SAYRE.

There must be a congenital cranial obliquity in a faker. Like one of the theories regarding the genesis of cancer, the cell is present at birth and is quiescent until called into activity, growing apace when it starts: the cell is ineradicable. There are many types of fakers. The educated faker is of the confidence-man type—the kind that will sell blue sky at prices depending on its intensity of hue. The uneducated faker is particularly fitted for quack doctoring, for fools break in where angels fear to tread; ignorance of anatomy and physiology make him overbold. Boldness is necessary in his business; a faker in any way repressed by fear would be a failure. His talk may not be altogether bluff; it is a harangue made fairly real to him by self-hypnotism. He grows into a belief in his own outpourings. His vociferousness is simply an insistence of his immense importance to the world. When his income or loot reaches the stage of very easy money he regards the inflowing dollars as merely a tribute to his worth. This class of faker exemplifies a form of insanity—the ego is big, but it is all bloat. A moderate seeking for money is a commonplace human trait, but in the faker's greed it is intensified into a brain-storm continuous performance.

The *Journal of the American Medical Association* publishes from time to time the doings of medical fakers and drug confidence men. It occasionally becomes very nearly a "Newgate Calendar" in its exposure of criminality. It enjoys and purveys the funny things of medical drug rascality and sets a table of viands of that sort that is enjoyed by the medical fraternity and adjunct workers. A recent issue cites the methods and brazen effrontery of a person called Parry, the Miracle Man, alias Dad Parry, the Healer. This individual says he is not a doctor and "wouldn't be one for anything in the world," but nevertheless he has been convicted of the illegal practice of medicine several times and has been fined and imprisoned. He boasts of twenty-one arrests and nine incarcerations. He is a "company" and has a secretary and treasurer. The gross revenue of the concern up to August, 1920, was over $290,000. The company has its jackall M. D., by the name of Kline, whose duty is evidently to cover a multitude of sins, selling or renting his degree for a weekly wage, like apostate drug clerks did their registration certificates in the days of the whisky drug joints in Kansas, as a cover for back-room bars and illegal sales.

Nothing succeeds like success when the sucker class is large and avid.

As to his preparation for the healing business, he owns up that he was a house mover, then ran a coal yard, but succumbed to ailing eyesight—probably he could not see where to plant his houses, but thought he saw the profit in war-time coal. Apparently the latter paralyzed his sight completely, but the Deity interposed and sent him "visions" to take the place of sight, instructing him how to compound healing medicines. He did not get his information in one sitting; it came gradually, and reading his Bible helped. He fails to tell if he had a blind man's Bible or an ordinary divinity-circuit red-edged edition. When asked by the lawyers what part of the Bible gave him his drug lore, his offered quotations were as mixed as his medicines.

He was not a versatile compounder of drugs—his armamentarium was limited. He was armed with fourteen points, it is true—that is, he wielded fourteen remedies, but their difference was altogether in the labeling and flavor. They were like Sam Weller's pieman's pies—the meat within was the same, but the flavor differentiated the output: "It's the seasonin' that does it; I can make any one of them at a moment's notice just as the market changes."

The formula—nay, in the vulgar tongue it was probably a "receipt"—called for 'ile, water and alkeyhol (25 per cent alcohol, 25 per cent water, and 50 per cent of oil), and in this time of high prices be it recorded that he used olive oil, when if he had been an ordinary adventurer he might have used cottonseed, peanut or corn and have saved money. When the flavorings were looked into it seems as if the man had acquired a defunct perfumer's stock as a job lot, for his camouflages were made from the oils of spearmint, clove, sandalwood, juniper, cinnamon, peppermint, spikenard, anise and lemon. And with this formula with varying simple or compound flavors, he says he cured everything. Among a few of the ailments he routed are tuberculosis, gallstones, tapeworm (these with one remedy!); Bright's disease, influenza and "weak women"; leprosy, plague, bowel trouble; inflammation of throat, bronchitis; eczema, smallpox, varicose veins, dropsy, heart, kidneys, throat, St. Vitus' dance, rheumatism, nerves, curvature of spine, blindness, deafness, cataract, venereal diseases.

Each bottle contained six and two-thirds ounces. The dose for adults, *one bottle*. One-fourth was alcohol, please remember. The result was immediate—and results are what patients want; an "O be joyful" jag was nearly always assured. Think how easy testimonials would flow, not after the dose, perhaps, but while the dose was "working."

He cured cancer; cured himself of cancer of the liver—"vomited it up." He described it as "a great, big, black cancer" that was delivered with difficulty. He informed his auditors that there were fifty-four (no, not fifty-seven!) varieties of cancer. "Fibroid cancers is awful. I never seen one yet that the medicine wouldn't get in three minutes." This surely is speeding and putting aëroplanes to blushing emulation!

His M.D. man, in one of the company letters to a prospective patient, does not withhold any evidence he knows of. He assured the correspondent that "medicine No. 13 has actually grown new eyes in heads where they had run out." "It is an actual fact in several cases."

Parry also sold a book on the "Cause of Disease," "worth its weight in gold," but it only brought three dollars. The worst thing that seems to have happened to Parry so far is that the government has issued a fraud order, and now he cannot get any mail. The cheerful "please find enclosed" comes not to his recovered eyesight. It is to be hoped that some way will be found to part Parry and his patients. The "please find enclosed" ought to be written on prison walls with the name of Parry following it.—*Western Drug Record.*

Termination of Cases Prosecuted for Violation of Food and Drugs Law and Regulations.

(September 1, 1920, to June 1, 1921.)

Defendant, Town, Violation, Date of termination, Fine, Inspector.

W. H. Coolidge, Agra. Maintaining insanitary meat market. October 22, 1920. $25. Da.

Farmers' Union, Allen. Offering for sale eggs unfit for food. October 7, 1920. $5. B.

Arma Bottling Works, Arma. Use of saccharin in manufacture of pop. October 14, 1920. $10. De.

J. W. Shindhelm, Augusta. Maintaining dirty grocery. March 16, 1921. $25. Morgan and Da.

E. E. N. Coan, Barnes. Maintaining insanitary drug store. March 24, 1921. $25. Da.

R. Meeh, Bern. Maintaining insanitary meat market. November 9, 1920. $25. Da.

Harry Farlow, Bolton. Maintaining insanitary grocery. April 14, 1921. $20. I.

B. M. and W. W. Shirley, Chanute. Unprotected food display. March 14, 1921. $25. De. and I.

D. W. Blair and L. M. Peterson, Chanute. Violation of bread-loaf-weight law. March 15, 1921. $25. De. and I.

A. Citti, Chanute. Manufacturing substandard ice cream. September 3, 1920. $25. De.

Peter Starns, Chanute. Manufacturing substandard ice cream. September 3, 1920. $25. De.

Fred Alexander, Chanute. Manufacturing substandard ice cream. September 3, 1920. $25. De.

D. R. Brooks, Coffeyville. Manufacturing substandard ice cream. September 8, 1920. $25. De.

K. C. Coukoulis, Coffeyville. Manufacturing substandard ice cream. September 7, 1920. $25. De.

Jas. Pappadakes, Coffeyville. Manufacturing substandard ice cream. September 8, 1920. $25. De.

R. D. Andrews, Coffeyville. First count: Dried fruit and other bulk food products not properly covered to protect from dust, flies, vermin and other contamination. Second count: Food products on sidewalk; bottom of container not up 18 inches from sidewalk. April 25, 1921. $10. I. and Stahl.

Chas. Huggins and J. M. Huggins, Coffeyville. Dates, figs, bulk coffee, stuffed olives, pickles, honey, butter, cheese, sliced and ground meat, lard and compound, all unprotected. No means for covering properly to protect from contamination by flies, dust, vermin or other means. April 25, 1921. $25. I. and Stahl.

T. A. Knott and W. A. Smith, Coffeyville. Keeping on display for sale bakery goods, pies, dumplings, baked apples and cake not protected from dust, flies or other means of contamination. April 25, 1921. $15. I.

Chas. Huggins and J. M. Huggins, Coffeyville. Keeping and occupying a generally insanitary slaughterhouse; same in a dilapidated condition; walls soaked with blood and other animal matter; offal infested with maggots, and bones and manure and pools of blood over back yard; same not burned or buried. Meat only partly covered, and that not with clean, white cloths, when transported from slaughterhouse to market. April 25, 1921. $50. L., Stahl, Doctor Wells, and County Attorney.

A. K. Knight, Coffeyville. Occupying and conducting slaughterhouse in insanitary condition; hogs fed up to and all around slaughterhouse; yard bad from feeding; walls not painted or lime washed. April 25, 1921. $15. I. and Stahl.

C. Deves, Colby. First count: Insanitary conditions and uncovered goods. Second count: Baking and selling 18-ounce loaf of bread with no net weight plainly marked. October 9, 1920. $20. F. and Lewis.

P. Dunbar, El Dorado. Operating an insanitary grocery and maintaining an insanitary refrigerator. March 15, 1921. $10. Da. and Buckley.

G. H. Faulconer, El Dorado. Sale of dirty milk. March 15, 1921. $1. Da. and Buckley.

Chas. McClellan, El Dorado. Sale of dirty milk. March 15, 1921. $1. Da. and Buckley.

Jas. Kirkman, El Dorado. Sale of dirty milk. March 15, 1921. $1. Da. and Buckley.

E. G. Askey, El Dorado. Sale of dirty milk. March 15, 1921. $1. Da. and Buckley.

B. H. Bolinger, El Dorado. Sale of dirty milk. March 15, 1921. $1. Da. and Buckley.

E. J. Vanwinkle, El Dorado. Maintaining an insanitary grocery. March 11, 1921. $25. Buckley, Morgan and Da.

Clarence Cole, Emporia. Violation bread-loaf-weight law. March 1, 1921. $5. F.

Will Morgan, Emporia. Transporting uncovered dressed beef. March 1, 1921. $10. F.

John C. Gaede, Fredonia. Manufacturing substandard ice cream. September 11, 1920. $20. De.

H. A. Roselle, Girard. Manufacturing substandard ice cream. September 1, 1920. $25. De.

Miss M. F. Kerwin, Herington. Unprotected food display. March 9, 1921. $5. F.

Herington Ice Company, Herington. Sale substandard ice cream. September 10, 1920. $50. B.

Hinnen Bros., Horton. Maintaining insanitary grocery. November 12, 1920. $25. Da.

F. A. and W. S. Barrackman, Howard. Uncovered food display in store. January 27, 1921. $5. Dr. J. F. Castello and I.

J. C. Jackman, Independence. Manufacturing substandard ice cream. September 8, 1920. $100. De.

W. P. Deupree, Inman. Violation bread-loaf-weight law. March 7, 1921. $5. F.

Frank McCabe, Iola. Violation bread-loaf-weight law. April 1, 1921. $15. De.

Elmer Hoyte and Geo. Reppart, Junction City. Sale short-weight butter prints. April 26, 1921. $5. B.

L. Dulin, Kansas City. First count: Insanitary meat market. Second count: Offering for sale lard containing added beef fat. June 10, 1920. $25. I. and Nelson.

L. Dulin, Kansas City. Keeping for sale spoiled meat. October 29, 1920. $10. B. and Nelson.

J. Roehrig, Kansas City. Keeping for sale spoiled meat. October 26, 1920. $25. B. and Nelson.

P. B. Diltz, Kansas City. Offering for sale meats containing sulphite and added color. November 9, 1920. $10. I. and Nelson.

T. H. Kornfeld, Kansas City. Sidewalk display of vegetables not 18 inches above sidewalk. November 10, 1920. $10. I. and Nelson.

Prairie Brew Bottling Company, Kansas City. Use of saccharin in the manufacture of pop. November 10, 1920. $5. R.

N. Mannason, driver, Kansas City. Offering for sale bread in violation of bread-loaf-weight law. (On motion by defendant's attorney to dismiss, judge ruled that no violation had been committed, for the reason that no purchase was made by the inspector, and dismissed the case.) November 30, 1920. I. and Nelson.

Sol Moritz, Kansas City. Violation bread-loaf-weight law. December 4, 1920. $5. I. and Nelson.

Pete Koclanes, Kansas City. Unprotected display of bakery goods. December 3, 1920. $10. I.

Joseph Hovazka, Kansas City. Violation bread-loaf-weight law. December 3, 1920. $5. I. and Nelson.

Pete Koclanes, Kansas City. Violation bread-loaf-weight law. December 3, 1920. $5. I. and Nelson.

Wm. Pietrzyk, Kansas City. Violation bread-loaf-weight law. December 3, 1920. $5. I. and Nelson.

Smith Baking Company, Kansas City. Violation of bread-loaf-weight law. Violation of bread-loaf wrapping regulation. Settled by agreement. I. and Nelson.

Ben Kozewsko, driver, New York Bakery, Kansas City. Violation bread-loaf-weight law. December 28, 1920. $5. I. and Nelson.

S. C. Harner, Keats. Unprotected food display. January 14, 1921. $5. F.

Henry Weigand, La Crosse. Failure to candle eggs. September 22, 1920. $20. F.

F. E. Frederick and A. A. Bowen, Linwood. Maintaining insanitary grocery and meat market. April 5, 1921. $5. Da.

Fred Schmidt, Lucas. Violation of bread-loaf-weight law. November 8, 1920. $10. F.

F. J. Mealey, Lyons. Insanitary food display. March 24, 1921. $5. F.

C. J. Smith, Milan. Failure to candle eggs. September 10, 1920. $20. I.

J. D. Kelsey, Moran. Sale short-weight prints of butter. March 21, 1921. $25. De.

K. W. Girdner, Ness City. Violation of bread-loaf-weight law. April 14, 1921. $5. F.

H. H. Peyton, New Albany. Maintaining insanitary grocery. April 6, 1921. $25. I.

A. K. Postlewait, Oakland. Maintaining insanitary meat market. December 29, 1920. $5. Denton and Da.

R. L. Howard, Osawatomie. Use of cocoanut oil in manufacture of ice cream. December 20, 1920. $25. R.

M. F. Bolden, Osborne. Use of rotten apples in the manufacture of cider. October 22, 1920. $10. F.

P. W. Humphrey, Paola. Sale of adulterated drugs. February 15, 1921. $10. F.

Jas. Leary, Parsons, representing U. S. Dairy Company, Joplin, Mo. Selling substandard ice cream. October 9, 1920. $50. De.

Clare Newby, Parsons. Sale of cream from cows known to be tubercular. February 25, 1921. $25. I. and Taylor.

H. L. and Chas. Peister, Peru. Maintaining insanitary grocery. $30. I.

Pittsburg Coca-Cola Bottling Works, Pittsburg. Use of saccharin in manufacture of pop. October 13, 1920. $10. De.

Pittsburg Steam Bottling Works, Pittsburg. Use of saccharin in manufacture of pop. October 13, 1920. $10. De.

J. Streck, Russell. Offering for sale bad eggs. November 18, 1920. $10. B.

E. F. Lalicker, South Haven. Offering for sale eggs unfit for food. September 10, 1920. $10. I.

J. C. Higdon, South Haven. Offering for sale eggs unfit for food. October 10, 1920. $10. I.

W. W. Partington, Sterling. Sale of watered milk. March 25, 1921. $25. De.

Daub Bros., Strong City. Insanitary grocery and unprotected food display. March 3, 1921. $10. F.

Heinley & Kanoff, Topeka. Sale of honey adulterated with glucose. March 22, 1921. $5. I. and Denton.

L. M. Fowler, Wellington. Sale substandard ice cream. September 10, 1920. $10. I.

C. E. Curry, Winchester. Maintaining insanitary soda fountain. April 20, 1921. $10. Da.

Report of Division of Water and Sewage, November, 1921.

Albert H. Jewell, Chief.

Permits Issued or Refused for Waterworks and Sewerage.

Date.	*Place.*	*Nature of improvement.*
Nov. 16	Elgin	Water supply.
Nov. 16	Abilene	Sewer extension (Lat. No. 58, S. D. No. 11)
Nov. 23	Burlington	Sewer extension.
Nov. 25	Elgin	Sewer system.

Inspections Made.

Date.	*Place.*	*Nature of improvement.*
Nov. 4	Salina	Stream pollution.
Nov. 8	Caldwell	Water supply; sewage disposal.
Nov. 9	Wellington	Water supply; sewage disposal.
Nov. 10	Oxford	Water supply.
Nov. 10	Winfield	Water supply; railroad supply.
Nov. 10	Arkansas City	Water supply; railroad supply.
Nov. 11	Valley Center	Water supply.
Nov. 11	Mulvane	Water supply.
Nov. 12	Wichita	Water supply; railroad water.
Nov. 16	Atwood	Final inspection sewage system. Inspection water supply.
Nov. 16	Colby	Water supply; sewage disposal plant.
Nov. 17	Oberlin	Inspection water plant. Conference on sewerage system.
Nov. 17	Norton	Inspection of disposal plant at State Tuberculosis Hospital.
Nov. 18	Mankato	Samples of water collected.
Nov. 23	Atchison	State Orphans' Home, sewerage.
Nov. 25	Rosedale	Turkey creek diversion.
Nov. 28	Eureka	Inspection water filtration plant.
Nov. 29	Iola	Inspection of waterworks improvement.
Nov. 30	Humboldt	Inspection of Miller refinery at Humboldt with regard to pollution of Humboldt water.

Plans or preliminary reports have been received or conferences have been held with municipal authorities for new work at the following places:

Centralia	Water supply and sewerage.
Colony	Water supply and sewerage.
Conway Springs	Sewerage.
Emporia	Sewage disposal.
Herington	Water improvement.
Highland	Water improvement.
Howard	Water filtration and sewerage.
Lawrence	Water improvement.
Marion	Water filtration.
Moline	Sewerage.
Sterling	Sewerage.
Topeka	State Hospital water improvement.
Utica	Water supply.
Valley Falls	Additional water supply.
Wathena	Water supply and sewerage.
Lawrence	Municipal swimming pool.
Parsons	Water filtration.

Neodesha	Water purification improvements.
Oberlin	Sewerage.
Hoxie	Waterworks and sewer extension.
Lindsborg	Sewer extension.
Pratt	Water improvements.
Larned	Improvement water supply.
Ottawa	Sewer extension.
Salina	Sewer extension.

Record of analyses made in Water and Sewage Laboratory at Lawrence during the month of November, 1921:

	Bact.	*Chem.*	*Miscel.*
City supply	564	5	..
Bottled water	1	..	..
Private supplies	48	..	..
Railroad supplies	10	..	..
Ice	1	..	..
Sand	..	..	6
Chlorides	..	..	2
Bacteriological, miscellaneous	9	..	..
Chemical, miscellaneous	..	1	..
Salt	..	..	1
Totals	633	6	9—648

Licenses Issued.

Date.	*Place.*	*Person or firm and purpose.*
Nov. 22	Topeka	Topeka Pure Water Co. Bottled water.
Nov. 2	Valley Center	I. V. Burnham. Bottled water.
Nov. 2	Wichita	Distilled and Aërated Water Co.

Simplicity in Preparation of Blanks and Forms.

By Charles H. Lerrigo, M. D.

(Paper read at semicentennial, American Public Health Association, November 21.)

One of the duties of state registrars, under the model law, is to prepare, print and supply to all registrars all blanks and forms.

Blanks and forms are the confining channels through which flows the stream of vital statistics. Lacking their controlling direction, a surging mass of data would be hurled upon us such as would shame Niagara's flood in volume and be about as easily harnessed. By insistence upon the use of uniform blanks and forms, our data come to us in such a way that they are reasonably subject to classification.

But blanks and forms are only of value as they facilitate the gathering of information in reasonable accuracy. It is therefore of extreme importance that three parties at interest be considered in their preparation:

1. The one who is to originate the data.
2. The agent through whom the collection is to be made.
3. The ultimate consumer.

1. The party of the first part is first in our consideration in more ways than one. He must fully comprehend the blank that we ask him to fill. He does not know, and many never will know, just why we ask for all of this information; but at the very least, it must be called for in such a way that he hears the call in plain English.

2. The second party must know the whys and wherefores of our blanks, and they should be carefully explained to him.

3. The third party is the one for whom most of these data are gathered. When they are delivered to him they should be dependable, so that he may

not misinterpret them. It is more worth while to get a few definite, dependable facts than to gather large quantities of unintelligible fiction.

I think we shall all agree that in the preparation of blanks and forms for purposes of gathering vital statistics, the supremely important matter lies in reaching the understanding of the individual who is to fill out the blank and securing his cheerful coöperation. In this brief paper, therefore, I shall direct most of my observations to that end.

Our blanks may be roughly considered under two heads:

(1) Those current in all registration states, such as the standard certificates.

(2) Those formulated by registrars to meet their local needs.

Since the standard certificates represent the expenditure of so much time and exhaustive study on the part of our experts, there is not very much to say about them. Our disposition is to adopt them wholesale and pass them on to our local registrars for general distribution. This is a correct attitude in the main. Yet we must bear in mind, when we decide upon uniform blanks, that we are not a uniform people. Our country, catholic as it is, covers a vast stretch of territory and unites many states. It is easy to conceive that there may be some peculiarity about certain of the people dwelling in your particular state that will make them place an unusual construction upon some of the provisions of a uniform blank. You may have to change its form to suit their comprehension.

I hold in my hand a copy of the revised standard certificate of birth, a document that may well be considered to be the last word in standard blanks (at least for ten years). Yet I find that a large percentage of the doctors and midwives of the state of Kansas do not fully comprehend all of its sections, especially that enumerated as item 20. I agree that the questions of that item are clear enough—to you and to me. But "the proof of the pudding is in the eating." As I examine the certificates coming in from doctors and midwives, I have ample ocular evidence that it is not clear to them. Item 20*a* asks, "Born alive and now living?" They reply, "Yes," or they say, "4 a. m.," or they even say in some cases, "Fine baby"; but only those who read the whole section carefully reply by giving the number of children of this mother who have been born alive and are now living.

Of course you will rise in just anger and say: "Call the blockheads to time. Make them read the certificate." Granting that your position is absolutely correct, I do not feel inclined to persist in the job longer than is necessary. My point takes me back to the original statement that there will always be the possibility that the person called upon to fill out these blanks may be one who is of small intellect and little learning, and that it is my business to present to such a person blanks and forms couched in the very simplest language. In Kansas we are therefore settling the question by making it so plain that the dullest mind must comprehend. In our new blanks we are printing the words "Number of children" to preface each of the divisions *a*, *b* and *c* of item 20, so that the item 20*a* will read, "Number of children born alive and now living," and this, I think, will be sufficiently pointed to be perfectly clear to those who read only in words of one syllable.

My object in using this as an illustration is to point to the fact that even standard forms may need to be brought into conformity with local requirements, and to stress the fact that the controlling factor is not so much whether the blank is clear to your own trained intelligence as whether it gets accurate returns from those who are to fill it.

I think that a registrar has but one way to satisfy himself that all of his blanks and forms are producing satisfactory returns, and that is by personal inspection. My state has supplied its local registrars for many years with books in which to keep their local record of births. Each book contains a dozen sheets of a printed blank that serves to maintain a very serviceable local record of births. It is on the whole an admirable form. I don't know where we got it, but my guess is that we copied it from some older eastern state, which, in turn, had copied its blank from one of the old countries. Under the general heading "Date of birth" it has three ruled columns in the following order: Day, month, year. It was not until I made an extended trip examining the books of the local registrars that I discovered anything wrong with that blank. Then I found that every new registrar had infinite trouble getting used to writing in the order named. The common order of writing a date in our country is not 18th November, 1921. It is November 18, 1921. When we prepare our blanks these things should have our consideration. Our registrars are not trained clerks. It is foolish to try to inflict upon them old styles that do not prevail in their own community. It is our business to make records easy for them to keep. A personal check of some of our returns might disclose many such points.

The blanks must follow along the lines of least mental resistance of the masses. We may argue that the masses are not right. But it is a poor argument. Our mission is to get certain data for use in most vital matters, and to get these data as accurately as possible. In gathering it we must use the forms of expression that the people understand.

In our local forms prepared for our own use we also find simplicity of prime importance. In my state we have long since ceased to send any certificates back for completion or correction. Writing letters about every deficiency is too costly. We experimented with many blanks, and found the simplest the best. We simply reproduced the items of the certificate on a printed blank and prefaced this with a line to the effect that the certificate named requires completion or correction as to items checked in red. This direct and simple statement brings as nearly 100 per cent of satisfactory responses as can be hoped for.

Not only should all blanks and forms be as simple as possible, but they should also be stripped of every unnecessary item, and a great effort should be given to make allowance for sufficient space on each line without crowding. While this is true of every part of the record, it is especially true where proper names are to be written. Names are of all lengths. They must often be written by those who have no clerkly skill. Such a person may write with reasonable legibility if sufficient space is allowed in the blank, but let him try to crowd his letters into a limited space and he gives you little but a confused blur of cryptographic symbols. Here again I am urging the importance of giving especial recognition to the limitations of the untrained and inexperienced.

On the whole I am content to make that the one point of this paper—prepare your blanks in such a way that they shall be adapted to the minimum intelligence of your constituency. Make them as simple as possible. Make them legible. Put them in words of one syllable. Adapt them to local needs. Make them so that "he who runs may read"—and also write. If you present them so poorly that the important records sought are rendered inaccurately, the failure lies with you rather than with the individual of eleven or twelve years mental age upon whom the burden was placed of attempting to fit data that he did not appreciate into a form that he did not comprehend.

Treatment of Syphilis.

Recent medical literature contains many expressions of opinion by syphilographers of this and other countries regarding the high incidence and early onset of neurosyphilis. Another condition cited by them is that an increasing number of patients in the infectious second stage are being observed in the clinics. Many of the writers claim that too rapid sterilization and inadequate treatment are regarded as important contributory factors. Because of the seriousness of the problem and the diversity of opinion regarding the cause, the United States Public Health Service recently addressed a communication to a few of the leading syphilographers of this country asking for an expression of opinion on this important subject. The general opinion of the men written to is expressed as follows:

"While a certain amount of the apparent increase of neurosyphilis is due to the increasing use of spinal-fluid examinations and other modern diagnostic methods, I think there is no question that the ineffective use of arsenicals plays a very important part in this most undesirable tendency. . . . The physician or health officer who is unable or unwilling to follow a syphilitic patient through a period of years, if not for life, should not attempt to treat the disease. Relapse is certainly the great outstanding fact of syphilis, and the so-called modern treatment has certainly not entirely done away with it. In particular, relapse in the nervous system and infectious involvement of the mucous membranes and genitalia are so alarmingly frequent under the inadequate use of arsphenamine that every agency which employs this drug in the treatment of syphilis should be thoroughly on the alert and equipped to detect the earliest manifestations of relapse."—*Stokes.*

"It appears to us that among the factors mentioned as probable causes, two are of paramount importance, viz.: (1) the tendency to undertreat; (2) the failure to interpret pathologic findings in the light of the clinical picture. (Fraser and Duncan; *British Journal of Dermatology and Syphilis,* July, August and September, 1921.) To these we would add another of almost equal importance—the tendency to interrupt treatment by periods of rest. To our minds the treatment of all syphilis ought logically to be continuous rather than intermittent. Early neurosyphilis in the form of neurorecurrences would be reduced to nil if this were done. Late clinical neurosyphilis might be equally easily avoided by the early routine use of spinal puncture and by adjustment of treatment to the pathological findings. We agree that the 'sterilization' treatment of syphilis, as exemplified by Pollitzer's method, is distinctly dangerous from the point of view of neurosyphilis, and that treatment should be directed toward building up the patient's own resistance to the disease. Stokes' discussion of this problem in his paper 'The Application and Limitation of the Arsphenamine in Therapeutics' (Archives of Dermatology and Syphilology, September, 1920; see Venereal Disease Division Abstracts, March, 1921) deserves wider circulation than it has as yet obtained.

The most crying present need of syphilotherapy is a standard treatment, sufficiently elastic to be adapted to all types of cases, and sufficiently simple to be used by the average physician. . . . Unless a physician feels himself competent to carry out all the necessary procedures in the treatment of any given case he should not attempt to treat it at all. Though many cases can be successfully dealt with by the general practitioner, he should realize that the appearance of any complicating features is sufficient to warrant the transfer of the patient to a competent syphilologist."—*Keidel and Moore.*

"Syphilis of the nervous system probably begins in the first year of the infection. The number of cases corresponds roughly with the total number of cases of so-called late neurosyphilis. These statements are based on the following observations:

"(*a*) The number of early cases showing positive findings in the spinal fluid; (*b*) familial types of neurosyphilis; (*c*) biologic evidence of a neurotropic strain of the treponema; (*d*) persistence of the infection in loco, as in aortitis, interstitial keratitis, etc.; (*e*) observation of patients who developed signs of early syphilis of the nervous system and who after many years died of paresis or other late degenerations; (*f*) no serologic evidence as yet exists showing normal spinal fluid in the early stage and its infection at a later period.

"Early neurosyphilis may manifest itself by obtrusive symptoms, by slight objective signs, or be asymptomatic. Unless they are properly and thoroughly treated these early infections may persist and cause late neurosyphilis.

"Every case of early syphilis should be treated intensively with arsphenamine and mercury, given systematically in courses consisting of not less than eight injections of arsphenamine or its equivalent, neoarsphenamine or silver arsphenamine, and fifteen injections of mercury; a minimum of two courses of the former and three of the latter should be administered. The treatment should be controlled by frequent Wassermann tests and a lumbar puncture made about six months after infection, or earlier if indications should exist. Complete neurological examination should be made in order to detect early involvement of the nervous system and as a control for future examinations.

"The treatment outlined is not an insurance against the occurrence of neurosyphilis, which not infrequently takes place during the active administration of the drugs. In such cases intraspinal medication administered by one familiar with the proper technic may be a necessary adjunct. It is only by controlling early neurosyphilis that we can hope to prevent the later degenerations."—*John A. Fordyce.*

It is of extreme importance, therefore, that physicians engaged in the treatment of syphilis carefully consider these statements and direct treatment toward the avoidance of the dangers outlined.

In inviting your attention to this matter the Service is not unmindful that many clinicians are engaged in the control of venereal disease merely from the standpoint of health officers, and that available funds do not admit of intensive or long-continued treatment and are often used for sterilization purposes for public-health protection. That there is danger to the public health in dismissing patients from treatment too early is seen in the claims of some observers who state that as larger numbers of infected individuals are brought under surveillance opportunity is afforded to observe an increased number of patients in the infectious second stage, which condition they believe to be due to inadequate treatment.

In the light of present knowledge regarding the subsequent danger to both the individual and community by ineffective and inadequate treatment, the Service urges that great care be exercised in recording case histories; in referring patients for intensive treatment to health centers or competent physicians to continue treatment when the clinic is unable to do so; and keeping cases of positive syphilis under proper observation until the period of danger for both the individual and the community has passed.

By direction of the Surgeon General. Respectfully,

C. C. Pierce, *Assistant Surgeon General.*

A Smallpox Peddler.

By Dr. Frank G. Pedley, State Epidemologist.

About October 15, 1921, a man arrived in Garnett, Anderson county, from Kansas City, Mo., to work with a road gang whose camp was immediately outside Garnett. He was in the early stage of black smallpox, and two or three days later reported sick. The disease was promptly recognized, the man isolated, and all of the other men in the gang vaccinated. The problem then arose as to who was to attend this man. Working with the gang was a man named W—— who professed to have no fear whatever of smallpox, and to whom the task of nursing a sick man appeared easier than building roads. He therefore offered his services to the county health officer, and it was agreed that he should act as nurse for this man and keep himself rigidly isolated from the outside world.

While the nursing apparently suited W——'s taste, the solitude and isolation certainly did not, and he frequently took the liberty of going to town for one reason or another. Being warned by his companions that he was breaking the law and fearing that he should be put under arrest, he boarded a train one night and disappeared.

Nothing was heard of him until two weeks later, when he appeared in Iola, Allen county, and reported sick. His sickness proved to be smallpox, and this was promptly recognized. A vacant house was procured and the man confined there. In the meantime the man in Garnett died, but W——, more fortunate than his former patient, after ten days or so of fairly severe illness felt practically as well as ever—so well, in fact, that he decided to leave Iola and get married.

The wedding trip included a visit to Thayer, Neosho county, and in this place he called on three families. This was about November 18. During the first week of December smallpox broke out in these families, and at time of writing fourteen cases of smallpox have occurred, all of which can be directly or indirectly traced to W——.

During the first week of December also the bride became ill, and later on her sister and mother-in-law (Mrs. W——, sr.). It does not seem to have occurred to W——, however, that all these cases could have had anything to do with his sickness, and while his wife was sick, and later on his mother, he kept constantly leaving the house where they were confined and associating with well people.

From the fact that his operations involved three counties, the association of this man with all these cases was not at first noticed, but when it became apparent he was immediately placed under arrest and is now awaiting his trial.

From this man's ignorance and criminal carelessness have apparently arisen at least fourteen cases of smallpox and four deaths—one of them his own mother. The mayor of Thayer, writing to the State Board of Health, stated that some of the cases there were so horribly disfigured by the disease that they "did not look like human beings."

This history is given not only for its interest, but to emphasize the fact that people of the type of W—— are to be found everywhere. In fact, at times we are completely at their mercy, and the only way to be perfectly safe is to be vaccinated.

Cereal Clean-up.

SPECIALTY MANUFACTURERS' ASSOCIATION INSTITUTES SYSTEM TO SAFEGUARD PRODUCTS.

Millions of dollars are lost by cereal manufacturers each year through damages caused by cereal insects.

The cereal members of the American Specialty Manufacturers' Association ask the coöperation of every wholesale grocer to help reduce this enormous loss.

We ask the coöperation of all handlers of cereals to the suggestions named below:

First. Do not pile new stock in front of old.

Second. As soon as a shipment of cereals is received, mark the month received on each case. Figures can be used for this purpose, for May use the figure "5"; June, "6"; July, "7," and so on. This will enable you to know whether or not your floormen are piling new stock in front of old.

Third. Have floor clean. A good scrubbing with soap and water at stated intervals is urged.

Fourth. Sprinkle lime on floor and in cracks.

Fifth. Clean up on broken cases. Do not leave open cases or packages in regular stock. Place them in your packing room, which should at all times be kept clean, and stock examined at stated intervals.

Sixth. Do not overstock at any time, especially not in the spring or summer months.

Seventh. A good plan is to change the cereal space at stated intervals and not always have it in the same place. It is also well not to pile the different cereals together. A row of canned goods in between is advisable.

Eighth. We suggest that once or twice a year your warehouse be most thoroughly fumigated. This will not only clean up on cereals, but also get rid of mice and rats.

The cereal members of the American Specialty Manufacturers' Association have organized a cereal section for the purpose of eliminating the annual loss as much as possible. State and city divisions will be organized of the representatives of such members, whose duties it will be to visit different warehouses in their territory and suggest betterment of conditions. Damaged cereal causes the jobber a great deal of expense and annoyance. Even if the manufacturer buys back the spoiled article, your expense in handling is not paid for. It is therefore to every jobber's interest to coöperate in this work. —*Price Current.*

Love Song of a Germ.

Come, bacillus, let us wander,
  Wander ever, hand in hand,
Down the capillaries yonder,
  Down that yonder shady gland.

Myriad microbe relations
  Have no claims upon you, dear;
Leave them to their occupations—
  You deserve your own career.

Countless cousins will not miss you,
  Happy in their own disease;
Tripping through the tender tissue,
  We may work what ills we please.

Does the wanderlust possess you?
  I'll indulge it, dearest germ;
We will roam to regions, bless you,
  Named by no researches' term.

Camping in the mountain muscles,
  Bathing in a quiet vein,
Dodging vicious red corpuscles,
  Summering at Aches-le-Brain.

Gliding in a light gondola
  On abdominal canals,
Only fancy shall control a
  Pair of perfect poison pals!

Slipping past the epigilottis,
  By the tonsils to the tongue,
Traveling till the days have caught us
  When we are no longer young.

Then, our tastes become domestic,
  We shall search a quiet home,
Snug and safe from antiseptic,
  There to breed and not to roam.

Come, bacillus, my infection
  Grows too potent to suppress—
Quick, here comes your Aunty Toxin!
  Hide with me and tell me "Yes."

—C. P. Ivins in Life.

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OF THE
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S. J. CRUMBINE, M.D., EDITOR.

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No. 1. JANUARY, 1922. VOL. XVIII.

To all Mothers and Mothers-to-be:

GREETINGS:

It is the right and duty of every woman to be intelligently informed as to the structure of her own body and the essential facts concerning childbearing and child care.

The laws of health and the rules of child care are simple and their observance should be within the reach of all. Every girl should learn them as a part of her preparation for life.

Because we have not been wise enough to teach these things in our homes and schools, it becomes necessary to write this book in order to tell women about their own bodies and about the growth and care of their children.

The health of the children of the state is in the hands of the mothers of the state! They must first see to it that they are themselves fit for motherhood; that they know how to care for themselves in pregnancy and childbirth, and that they know how to care for their children after they are born.

Every mother has it in her power to secure for her child breast feeding, growth-producing diet, fresh air, plenty of sleep and physical freedom.

The mothers of any community in Kansas have it in their power to secure for that community and for the protection of their families pure milk, pure water, proper sewage and garbage disposal, and quarantine of communicable diseases.

Will you not look well to these matters and use your influence in your community and do everything you can every day to give your child and every Kansas child a 100 per cent chance for health and success?

Faithfully yours,

FLORENCE BROWN SHERBON.

Grateful acknowledgment is hereby made to Dr. Anna E. Rude and Dr. Florence McKay, of the Federal Children's Bureau, and to Dr. Elvenor Ernest, of Topeka, who kindly read and criticized Part I; and to Dr. Paul Belknap, of Topeka, and the staff of the State Board of Health, who kindly read the entire book and gave many valuable suggestions and criticisms.

FLORENCE BROWN SHERBON.

PREPARED BY

FLORENCE BROWN SHERBON, A. M., M. D.

(Chief of Division of Child Hygiene 1919-1921.)

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Part I.

CHILDBEARING.

CHAPTER I.

MENSTRUATION.

Time of First Appearance.

This may occur as early as eleven or as late as eighteen. It tends to occur earlier in robust, vigorous girls, and later in girls who are puny, undernourished and poorly developed.

As soon as a mother notices that her girl is beginning to round out or show any signs of developing for maturity, and in any case by the time she is twelve years old, she should explain *menstruation* to her and provide her with sanitary napkins and belt and explain their use. She should also tell her how to take care of her health at this time.

Girls who have not had this preparation may be terrified and tell no one, not even their mothers, and do things which permanently injure their health.

Change of Life or Menopause.

Between the ages of forty-three and forty-seven years menstruation usually stops. This is a perfectly natural thing and should not upset the health or cause any nervous disturbance. Sometimes the menstrual flow ceases gradually, and sometimes suddenly without any warning. Either way may be normal.

Regularity of Periods.

The periods may be regular from the first, or they may, in young girls, be somewhat irregular at first, even in perfectly healthy girls.

After menstruation is fully established it should occur regularly, except for childbearing, until the change of life occurs.

Young girls may miss one or more periods any time they are overstrained or out of health. Every effort should be made to improve the general condition of such a girl, but nothing should be done to force the period. She is much better off without it while out of health, and nature is only trying to save her this drain.

If menstruation occurs too often a physician should be consulted.

Length of Periods and Intervals.

Each woman has her own natural length of period and interval between periods. Most women menstruate on the 28th day after the beginning of the previous period and continue to menstruate for from three to five days. An interval of twenty-one, twenty-five or thirty days may be natural, however, and a perfectly healthy woman may always follow an interval other than twenty-eight days. Moreover, some healthy women never flow longer than two days, while others always flow seven or eight days. The best test is the health and well-being of the girl or woman. If she is not healthy and vigorous in every respect she should consult a physician.

Hygiene of Menstruation.

Bathing. It is never more necessary or desirable to bathe than during menstruation. Girls should be taught to bathe this part of the body daily with warm water and soap and change the napkin often enough to keep free from odor. They should also be taught to take warm or tepid baths daily. A girl or woman who bathes frequently at all times and is in a healthy condition cannot possibly harm herself by cleansing baths during her periods. Cold baths should not be taken, except possibly a strong, vigorous woman who is thoroughly accustomed to a daily cold bath. Neither should one go swimming at this time.

Work and Exercise. A girl or woman who is well developed and vigorous and in good health will get through her period better if she keeps active. If she is regular and has no tendency to menstruate too much, she may do anything within reason which she is accustomed to do. It is unwise to undertake strenuous or unusual tasks at this time. Girls should be discouraged from playing games, such as basket ball, swimming, taking unusually long hikes, or anything which will overfatigue them. Most women should plan to do the washing, housecleaning, etc., when not menstruating.

Rest. Girls and women who are run down, puny, poorly developed or who tire out easily, or who are easily made to flow too much, should take extra rest just before and during the periods. If it is impossible to lie in bed in the morning, a woman may go to bed very early, and, if possible, lie down during the day, if only for a few moments at a time. She should plan to make her work light. She should sit while doing as much of her housework as possible.

The Bowels and Diet. Every girl should be trained from the first to watch her bowels and see that they are perfectly open before menstruation begins, and they should be cautioned to eat lightly of meat and sweets and freely of fruits and bulky vegetables. Taking cathartics should not become a habit. Diet, exercise and regularity, with plenty of water, should make the taking of cathartics entirely unnecessary.

Clothing. The girl should be trained to keep her skin healthy at all times by much bathing and rubbing, and the body should be freely exposed to the air. It is a mistake to coddle the skin and make it sensitive to exposure. If one is accustomed to wearing thick clothing it is a mistake to change from this to thin party clothes while menstruating. It is also risky to sit in draughts or stand with thin shoes on cold floors, or allow the feet to remain wet. This is because a surface chill may cause congestion and pain in the womb or cause the flow to stop.

General. In general, a woman may do almost anything that she should do at any other time. While the period of menstruation is sometimes spoken of as "the sick time," it should not be so considered. A girl should be taught that menstruation is natural and that she should expect to feel just as well then as at any other time. If she does not she should try to find the reason and correct it.

CHAPTER II.

DISEASES AND DISORDERS OF THE ORGANS OF REPRODUCTION.

Painful Menstruation.

Causes. Constipation, bad posture, poor general development, inactivity and misplacement of the womb are the commonest causes of painful menstruation.

Treatment to Prevent Pain. 1. A dose of salts one or two days before the menstrual period will often relieve the congestion and also remove the pressure upon the womb of an overloaded bowel.

2. Pain caused by bad posture and misplacement of the uterus may be somewhat relieved by taking the "knee-chest position." This consists of getting on one's knees on a bed, keeping the hips as high in the air as possible but letting the head drop to the bed and rest on one cheek. This position should be held for ten minutes or longer. This allows the womb to drop forward and rise in the abdomen, thus relieving the congestion caused by the womb settling down in the pelvis. This is more effective if taken after retiring, as the womb will then not have a chance to settle down again until getting on the feet in the morning.

3. Pain caused by poor circulation and cramped position, as in the case of stenographers and women who sit a great deal, may be prevented and the general health greatly improved by regular and systematic exercise. Swimming, æsthetic dancing, rowing, golf, dumb-bells, hand ball, Indian clubs or tennis are all good to develop the body and correct the effect of constant sitting.

An excellent exercise for strengthening the muscles and ligaments supporting the pelvic organs and for improving the circulation, regulating menstruation, etc., is the exercise devised by Dr. Clelia Mosher, of Leland Stanford University. This consists of lying flat upon the back with the knees drawn up and the hands spread out upon the abdomen. Begin to count regularly and rather briskly, and with each odd number contract the abdominal muscles in such a way as to raise the hands as high as possible; relax with each even count. Begin with twenty counts night and morning and gradually increase to fifty or more.

Relief of Pain. 1. A hot drink, such as ginger tea or peppermint water.

2. Heat to the abdomen; a hot-water bag, a hot flatiron, an electric pad, a bag of hot salt or sand, or a Mason jar filled with hot water.

3. An injection of water as hot as can be easily borne, given in the bowel, will often relieve the pain of menstruation. *Vaginal douches should not be used without a doctor's orders.*

4. Rest in bed.

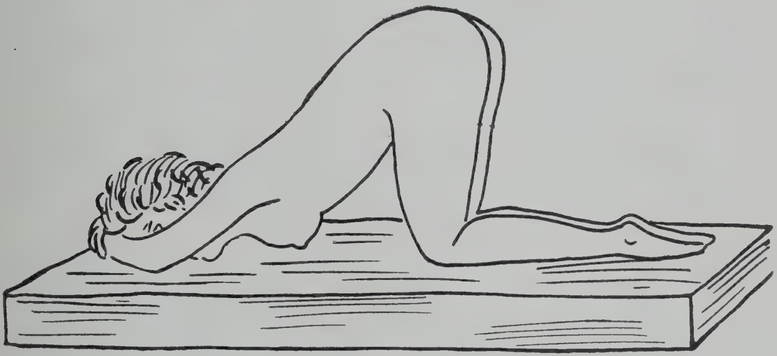
5. Medicines should never be taken without a doctor's orders. Patent medicines, or pain medicines, aspirin, acetanilide, etc., are dangerous. Girls should always be cautioned to not form the habit of taking anything of this kind.

Leucorrhœa.

Any habitual discharge from the uterus, other than blood, is called leucorrhœa. A doctor should be consulted whenever this lasts for any length of time. Careful attention to the general health, such as regulating the diet, rest, exercise, etc., will often improve this symptom. It may mean nothing more than a congestion from bad posture or constant sitting, which will clear up with correction of habits. On the other hand, it may be a sign of a serious infection of the womb, ovaries or tubes, which should have prompt medical treatment.

Inflammations.

Soreness or tenderness in the abdomen between menstrual periods should be always referred to a physician. The right ovary sometimes becomes infected from an infected appendix. Pain or tenderness in either side may mean infected Fallopian tubes. Any condition of this kind calls for treatment. Neglect may lead to sterility or invalidism.



The knee-chest position.

Displacements.

Cause. The uterus or ovaries may become acutely displaced by a fall or other accident. Most commonly displacements are caused by bad posture, general lack of muscle tone and habitual constipation in sedentary women. Childbearing women who have unrepaired tears of the perineum or who suffer from subinvolution of the womb are especially liable to have displacements. Displacements may be forward or backward, or simply a falling or lowering of these organs.

Symptoms. Sometimes no apparent inconvenience is experienced. A marked displacement may be the cause of sterility. Sometimes acute pain is experienced, sometimes heavy dragging or aching sensations. Backache may or may not be present. Painful menstruation may follow acute displacement. Headache in the top of the head may be a symptom.

Treatment. An acute displacement can sometimes be corrected by taking the knee-chest position faithfully for some time. If this does not give relief, a physician should be consulted. In all cases the fundamental thing is building up the general health. If good muscle tone can be restored a good many cases recover of themselves.

Tumors.

Young women may have fibroid and cystic tumors of the ovaries or uterus, and seldom or never have cancer. Women from forty on are liable to cancer, and also sometimes develop fibroids during the change of life. Fibroids and cysts do not injure the health until they become large enough to press on nerves, blood vessels or other parts. Cancer is always fatal unless discovered in time for safe and complete removal by operation.

The symptoms of fibroid and cystic tumors are: sense of pressure; increase in size of abdomen; and sometimes irregular bleeding between menstrual periods, and sometimes pain.

The symptoms of cancer of the womb are: bleeding from the womb in a woman who has passed the change of life; pain or tenderness; discovery of a mass or growth. Women past forty-five should have a pelvic examination any time they experience any discomfort or abnormal sensation in the pelvic region, and should always promptly report to a physician if bleeding occurs. Cancer is one of the most frequent causes of death in women past forty-five. In most cases the removal of the very first nodule of growth would permanently stop the process. Cancer frequently first appears in the breast. Every woman who discovers a lump of any kind in the breast should at once consult a good physician.

Small growths called polypi sometimes grow from the mucous lining of the uterus. These do no harm except that they may easily bleed or become injured. Sometimes they become large enough to be troublesome. It is a very simple matter to have them removed.

Syphilis and Gonorrhœa.

These are the so-called venerial diseases. They are usually contracted, directly or indirectly, through sexual intercourse with prostitutes. They may, however, be innocently contracted through kissing or drinking after infected persons, from public toilets, toilet paper, chains or handles of the various types of toilet flush, public towels, etc. This rarely occurs, fortunately, since these germs die very quickly on exposure to light and air. Still everyone should be extremely careful to avoid touching anything which may have recently been contaminated.

Gonorrhœa is the more common. It often makes both men and women sterile, and through infection of the baby's eyes while it is passing through the birth canal, it may cause blindness. This is why doctors and midwives in many states are required to put prophylactic drops in every baby's eyes soon after it is born.

Gonorrhœa is very often transmitted from the husband to the new wife. Inflammation of the tubes and ovaries may result, and often an operation becomes necessary. No person with an active infection should marry. It is possible to cure gonorrhœa, but it takes a long time and very persistent treatment. Men often become careless, or assume that they are cured before they really are, or put their faith in false "sure cures." The germs may remain alive but inactive for a long time after all symptoms disappear. This is why a careful examination is necessary to determine fitness to marry.

Syphilis causes many stillbirths or dead-born babies, many miscarriages, and also many defective children. It is possible to cure syphilis, but it, like gonorrhœa, takes a long time and careful obedience to directions.

Every man and woman applying for a marriage license should be required to show a physician's certificate stating that they are free from communicable or hereditary disease.

CHAPTER III.

PREGNANCY.

The Biginning of Life.

The instant the ovum and the sperm cell unite in the body of the mother a new life has begun. In these cells are contained the "determiners" for every physical and mental trait that child will ever possess. The human egg is laid in its nest, the womb, and the mother can no more "mark" the child or change its inheritance than the bird can change the color of the birdling in the egg upon which she sits with solicitous care. The baby is just as much an individual during the nine months he is his mother's guest before birth as he ever will be after she has him in her arms.

Every seed planted in the ground is a plant egg and contains the "determiners" for the color, shape and every minute detail of the plant which is to come from this seed egg. The gardener cannot change this, but it does make a great deal of difference as to the kind of soil and kind of cultivation it receives both before and after it shows above the ground. This is the difference between heredity and environment.

So, after all, the mother has a great deal to do with the kind of a child she produces out of its given heredity. She can nourish it from the fertile soil of blood made rich by good food, sleep, air, exercise and rest; or she may impoverish it by her own unhygienic living.

Nothing is so important as that the expectant mother should realize that from the moment of conception she "does not live to herself alone."

The Nourishment and Growth of the Fœtus.

Manner of Growth. The fœtus (the developing child) is attached to the womb of the mother by means of the "afterbirth," or placenta. The placenta takes up nourishment from the blood of the mother and carries it to the circulation of the child through the veins which run through the cord which connects the child with the placenta. The artery in this cord carries the waste from the blood and kidneys of the fœtus to the placenta, which in turn gives this waste into the blood of the mother.

The only connection between mother and child is through the placenta and cord. There are no nerves in the cord or placenta. The fœtus develops its own nervous system and its own body, after the pattern of its inheritance and out of the material supplied to it from its mother's blood. Even the blood vessels of the child do not open into those of the mother. They simply lie side by side, and the nutrition from the mother's blood and the waste from the child filter or are strained through the thin walls of the blood vessels by a process called "osmosis."

Maternal Impressions. From all these facts it is very plain that no mother can "mark" her child. The mother's mental and nervous condition will have no effect whatever upon her child unless through anger, fright, worry or shock she injures her own health and poisons her own blood and thus makes it impossible for her to properly nourish her baby.

Prenatal amputations, usually of a hand, may be caused by the cord becoming wrapped about the wrist and shutting off the circulation.

Harelip and cleft palate are caused by failure of the two halves of the face to fully unite.

Colored birthmarks are caused by deposits of pigment or coloring matter similar to the pigment in the hair and eyes. No one knows just why this happens. The resemblance of these colored patches to known objects is purely accidental. Much more often these patches resemble nothing whatever. A spot of ink on the floor is just as apt to resemble some object.

Every pregnant woman should be quite easy in her mind concerning this subject. She should, however, exercise self-control and not give way to anger or fright because of the effect upon her own health, and thus, indirectly, upon the nutrition of her child.

Rate of Growth. The fœtus grows very rapidly considering the small size of the ovum or cell from which it starts. Even so, it takes two weeks to reach the size of a pea and three months to grow as large as a goose egg.

It is impossible to tell whether the fœtus is male or female until about the third month. By seven months the fœtus is fourteen or fifteen inches long and weighs two to three pounds. Its development is not complete, but occasionally, with very favorable care, a fœtus born at seven months will live.

At full term (ten lunar or nine calendar months) the average baby measures nineteen to twenty-three inches and weighs seven to seven and one-half pounds, boys averaging slightly heavier than girls.

The Protection of the Fœtus.

The fœtus is protected by the long cord, which makes it difficult for the placenta to be jerked or pulled loose from the wall of the uterus when the pregnant woman gets a jar or fall.

The child is also surrounded by a bag of water, which protects it from pressure and permits it to develop symmetrically.

It is protected by the fact that the mother's blood is filtered through the capillary membranes between the womb of the mother and the afterbirth of the child. This prevents most disease germs from finding their way from mother to child. Even the babe of a tuberculous mother will not have tuberculosis germs in its body when born, although it may acquire them very shortly afterward if left with its mother.

Syphilis is the one chief exception to this rule. In some way which is not at present understood, the germs of syphilis may be transferred from mother to child.

The Signs of Pregnancy.

It is sometimes a difficult matter to diagnose early pregnancy, and good physicians are sometimes mistaken. Usually, however, the following signs occur and may be taken to mean that pregnancy has probably occurred:

1. **Stopping of the Periods or Menses.** In a healthy woman who usually menstruates regularly this is a strong indication that pregnancy exists.

2. **Morning Sickness.** Vomiting on an empty stomach or after the first food is taken in the morning, when the digestion and health do not seem to be otherwise disturbed, is a very common experience in pregnancy. When it

appears along with the stopping of menstruation it is pretty conclusive evidence. Various degrees of nausea may occur without vomiting.

3. **Enlargement of the Breast and Darkening of the Ring About the Nipple.** This usually appears along with the previous two signs and lends strength to the probability of pregnancy.

It must be remembered, however, that a tumor in the uterus or other disorders of health sometimes produce all these symptoms, and that once in a long time all may occur without pregnancy.

4. **Visible Enlargement of the Abdomen** is also one of the probable signs. This occurs at very different times and in different degrees in different women. Little or nothing can be told as to duration of pregnancy by this sign.

5. **The Gait of Pregnancy.** A woman walks differently when pregnant, leaning slightly backward and balancing herself with care. This characteristic gait is sometimes called "the pride of pregnancy."

6. **Quickening or Feeling Life.** This is positive if the woman is absolutely sure she feels this. This usually occurs about midway in pregnancy, or at four and one-half months. The contents of the abdomen are always in motion, however, and the muscles of the uterus, or womb, even contract in health. If a woman is a little nervous or strained over the matter it is easy for her to think that a bubble of gas in the intestine is the movement of a child. Every now and then a woman who is not pregnant tells her doctor she is sure she has felt life.

7. **Feeling the Fœtus Move.** When the physician or other person lays hands on the abdomen and actually feels and sees the child move, this may be considered to be positive.

8. **Feeling the Parts of the Body.** When the physician can make out the head and various parts of the child's body, this is also positive and is not likely to be stimulated by a tumor.

9. **Fœtal Heartbeat.** When the doctor hears the fœtal heartbeat there can no longer be any doubt. This can usually be heard after the fœtus rises in the abdomen at about the middle of pregnancy, or at four and one-half months.

10. **Laboratory Test.** The blood serum of the pregnant woman can be tested by newer laboratory methods where these are available, and show certainly from the beginning whether or not pregnancy exists.

How to Tell Probable Date of Confinement.

The length of pregnancy varies slightly in different women; therefore it is often impossible to compute the exact date of labor. Pregnancy lasts on an average of 280 days, or 10 lunar months. The usual method of estimating the date of confinement is as follows: Count back three calendar months from the first day of last menstruation, and add seven days. For example, if the first day of the last menstruation was October 10, counting back three months would give July 10. Seven days added would give July 17 as the probable date of confinement.

The English method of computing date of confinement may be preferred, viz.: Add 40 weeks, or 280 days, to the last day of the last menstruation.

TABLE FOR COMPUTING EXPECTED DATE OF CONFINEMENT

Jan.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Oct.	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	Nov.
Feb.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	..	..	..	
Nov.	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	1	2	3	4	5	..	..	..	Dec.
Mch.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Dec.	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	Jan.
April	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	..	
Jan.	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	..	Feb.
May	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Feb.	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	1	2	3	4	5	6	7	Mch.
June	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	..	
Mch.	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	..	April
July	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
April	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	1	2	3	4	5	6	7	May
Aug.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
May	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	June
Sept.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	..	
June	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	1	2	3	4	5	6	7	..	July
Oct.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
July	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	Aug.
Nov.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	..	
Aug.	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	..	Sept.
Dec.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Sept.	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	1	2	3	4	5	6	7	Oct.

To use the table, find in the upper line the date of the last menstruation; the figure below will indicate the date when the confinement may be expected. If the date of first day of menstruation is January 10, then the date of expected confinement will be October 17.

CHAPTER IV.

DISORDERS AND COMPLICATIONS OF PREGNANCY.

Nausea and Vomiting.

Many women, especially with the first child, suffer from nausea and vomiting, or "morning sickness." This is annoying and sometimes serious. It usually tends to disappear by the middle of pregnancy. Unfortunately, there is no sure remedy known for this distressing condition. Some women are relieved by taking a hot drink or chewing a piece of dry toast before getting out of bed. Keeping the bowels open by eating a strictly anticonstipation diet, and the system flushed by drinking plenty of water, helps to minimize this discomfort.

Some women get relief by chewing something pungent after eating, such as a piece of preserved ginger root, or soda-mint tablets. The physician should be consulted, as there are medicines which sometimes give relief. At any rate, the physician should be kept in touch with the case. Sometimes nothing gives appreciable relief until the uterus rises out of the pelvis about the middle of pregnancy. Usually there is then almost immediate relief.

Unless the woman loses food enough that she becomes emaciated and loses strength this nausea does not seem to do any serious harm. A pregnant woman should try to keep up her strength by eating the most easily digested and nutritious food possible while passing through this period. Hot malted milk, eggnog, junket, buttermilk, peptonized milk, jellied eggs, etc., are all good to take immediately after vomiting, as considerable nutrition will be absorbed before vomiting begins again. Some women find that they have less disturbance if they eat four or five small meals rather than the usual three meals.

Salivation.

Salivation (too much saliva) is occasionally a complication of pregnancy, and may last for the entire nine months. There is little to be done except keep in perfect physical condition and spend as much time in the open air as possible. Chewing gum occasionally gives some temporary relief. Going on milk diet for a few days and rinsing the mouth with water in which a little alum has been dissolved may help to relieve this condition.

Constipation.

Many women suffer from constipation during pregnancy. The pressure of the womb upon the rectum is sometimes the cause, especially where the ligaments are lax and the posture bad, thus allowing the contents of the abdomen to drop into the bony pelvis or basin formed by the hip bones.

Diet is the most important factor, and the pregnant woman should eat an abundance of bulky vegetables, fruit and cereals. Plenty of water is also important.

Exercise should be kept up unless the doctor advises against it.

Laxatives should be used with caution, as many cathartic pills contain strychnia, aloin and other drugs which stimulate vigorous contraction of the intestinal muscles and may stimulate the same action in the uterine muscles and cause miscarriage.

Enemas of soapsuds or warm cottonseed oil are often helpful and may be used alternately with mild laxatives in obstinate cases. A habit of going to the toilet with absolute regularity is very important.

"Heartburn," "Water Brash" and Indigestion.

The belching of acid fluid after eating is a form of indigestion which sometimes occurs during pregnancy. All bread should be toasted or well dried and eaten very slowly. Potatoes had better be omitted for a time. Greasy food is apt to disagree, especially fried food. Eating very slowly and chewing with great thoroughness will minimize this discomfort; one should also be careful not to overeat.

While greasy food is especially aggravating in this disturbance, strangely enough, the taking of some form of oil or grease, such as a little cream, a spoonful of olive oil or butter a short time before eating seems to prevent this discomfort in some cases. Little or no fat should be eaten with the meal. One specialist prescribes a half cup of black coffee with a teaspoonful of unsalted butter in it, taken twenty minutes before meals.

Kidney Trouble.

The kidneys of the pregnant woman must eliminate the waste of both mother and child, and it is of the greatest importance that they should be kept healthy and active. When the kidneys become unable to eliminate the urea and uric acid and other waste products of the body, "uremic poisioning" develops and the woman may suddenly go into convulsions and may die of eclampsia. There is great danger that the child also will die. This condition is similar to acute Bright's disease or nephritis.

The symptoms are dropsy of the feet and hands, and puffiness of the eyes, sharp pains in the head, dizziness and floating specks before the eyes, and a general dull, depressed feeling. The skin is apt to look muddy and the tongue to be coated. The urine is scanty and highly colored.

These symptoms usually can be prevented by eating, drinking and exercising properly (as outlined in chapter VII, on the Hygiene of Pregnancy). If these symptoms, any or all of them, appear, the woman should stop eating and only drink milk or buttermilk (three or four pints daily), take a dose of salts, drink water freely, take a warm bath daily, *and see her doctor at once.*

Varicose Veins.

These are caused by the pressure of the developing child upon the large veins in the abdomen, through which the blood must pass from the extremities to the heart. Taking the knee-chest position every night, sleeping on the face as long as this is comfortable, sitting and lying with the feet upon another chair or pillow, gentle massage of the limbs, stockings supported from the shoulders, all help to make it as easy as possible for the venous blood to get back to the heart. Bandaging with roller bandages of muslin, elastic or flannel, or with adhesive bandages, will give some relief when the veins become very large. Wearing a well-fitted abdominal supporter will also help this condition.

A woman who always stands straight and has good muscle tone and good circulation is not apt to have this complication.

Swelling of the Feet.

Swelling of the feet is caused by the pressure in the abdomen, just as varicose veins are produced. Instead of the veins enlarging, fluid leaks into the tissues and causes a dropsylike appearance. The physician should be told at once of the appearance of this symptom, as it may be a forerunner of kidney trouble. The same things may be tried for relief as are described above for varicose veins.

Hemorrhoids or Piles.

Hemorrhoids or piles are caused from the same pressure which causes varicose veins and swollen feet. Treatment by a physician should always be obtained if possible. The bowels must be kept especially open and free, and enemas of soapsuds or oil used to make the bowel movements as easy as possible. Carbolated vaseline, zinc-oxide ointment or any simple healing salve will tend to allay the irritation.

Muscle Cramps.

Some women suffer from violent cramps of the muscles of the limbs during the later months of pregnancy. This is caused chiefly by pressure on the large nerves; toxemia also may play some part. Women who have bad posture and relaxed abdomens and who are on their feet a great deal are especially liable to suffer from muscle cramps.

In general, the woman should follow the suggestions given for the hygienic conduct of pregnancy to prevent and relieve cramps—relieve constipation, take knee-chest position, regular diet and elimination, regulate exercise, and avoid excessive fatigue. When the cramp occurs, vigorous rubbing, or rather kneading the muscles over the bone with the palm of the hand, like one were mixing bread, will give the quickest relief. If a woman is subject to cramps after going to bed she may help prevent these by taking a hot foot bath and rubbing the muscles well before retiring.

Leucorrhea.

There is an unusual amount of mucous discharge during the first and last months of pregnancy, caused partly by pelvic pressure and partly nature's effort to keep the vaginal cavity clean and sterile. There is nothing to be done for this except to keep the parts very clean by bathing with soap or soda water. If this discharge becomes very great or becomes yellow or green the physician should be consulted, as it may indicate an infection which should be promptly treated.

Pruritis.

Pruritis, or itching of the external parts, is sometimes annoying. It is apt to occur in women who are nervous and who suffer from insomnia. Excessive leucorrhea may also cause itching. Anything which improves the general condition will act favorably upon this. Local applications of soda water, carbolized vaseline, menthol or peppermint water will give temporary relief. Bathing the parts frequently with cold water will also relieve.

Bleeding During Pregnancy.

Bleeding during pregnancy always indicates that something is wrong and should be promptly reported to the physician. It may indicate that miscarriage is about to occur, or that the afterbirth has grown in the wrong place (placenta prævia). This may cause very serious hemorrhage. The woman should go to bed and keep strictly off her feet until her physician has seen her. No one should neglect this, thinking she is menstruating, even though pregnant. It is doubtful if this ever occurs. Those women who bleed and still go on to full term are lucky rather than wise.

Miscarriage or Abortion.

Both terms are used to apply to the loss of a child before the seventh month of intrauterine life. After the seventh month a child, though born prematurely, may live under favorable conditions. If born between the seventh month and full term it is said to be a premature birth.

Miscarriage is especially likely to occur during the second and third months of pregnancy, because the placenta or afterbirth is not firmly attached to the uterine wall until toward the fourth month.

Miscarriage is especially likely to occur at what would be the regular menstrual periods. For this reason a pregnant woman should mark these periods on a calendar and remember to be particularly careful to not overexert or get too tired at these times.

Causes. Miscarriage may be caused by anything which causes a sudden or forcible contraction of the uterine muscles. A fall, a shock, a fright, heavy lifting, overexertion, particularly sudden exertion, sexual intercourse—any of these may cause this unfortunate accident.

Many times infections tend to cause abortion or miscarriage. Smallpox and syphilis are especially liable to cause this accident. Indeed, syphilis is one of the chief causes of miscarriage and premature birth. Children's contagions are sometimes brought home to the pregnant mother by the school children, and in many such cases she forfeits the life of her unborn child. Drugs, especially cathartics, may cause contractions of the uterus when the bowels "gripe," and thus cause miscarriage. There are certain drugs which are used with criminal intent to produce this effect, all of which are very dangerous.

Symptoms of Miscarriage. Bleeding is usually the first symptom of threatened miscarriage. This is caused by the loosening of some of the "villi" or "fingers" which attach the afterbirth to the wall of the womb. A little oozing may accumulate behind and finally force the whole mass loose.

Women have been known to go to physicians for medicine to relieve constipation or backache or "bladder trouble," and not say that they were pregnant, or at least suspect that they were. This is taking a serious risk and is an injustice to both the woman and the physician. Any doctor or dentist consulted by a pregnant woman should be told of her condition.

If bleeding progresses to the point that the uterus begins to contract to expel this mass, which is now unnatural and irritating, the whole process resembles a miniature labor or childbirth.

Treatment. The first and most important thing is for the woman to go at once to bed and remain there, with no exertion whatever, until her physician has seen her.

If violent hemorrhage sets in the arrival of the doctor should be hastened with all speed. The hips may be raised on a pillow and cold applications used low on the abdomen. The foot of the bed should be raised upon a chair. Save all napkins and discharges for the doctor's inspection.

The patient should not raise up or exert herself in any way while the bleeding continues; she should lie absolutely quiet until the physician has pronounced it safe for her to get up. She must not even get up to urinate or move the bowels, and after severe hemorrhage should even be fed and turned.

After a miscarriage a woman should remain in bed for ten days and receive the same care as if she had had a normal childbirth. More ill health follows miscarriage than childbirth, largely because women do not commonly realize the importance of taking care of themselves.

In general, a woman should expect to feel well and vigorous during pregnancy. If she does not she should make a determined effort to find out the reason and correct it.

CHAPTER V.

PRENATAL CARE.

The best protection a woman can have at childbirth is good care from a physician. Next to this comes good help in her home and intelligent personal care from a nurse.

The Federal Children's Bureau has made many investigations as to why women and babies lose their lives or their health at childbirth. After studying the results of these investigations and consulting the best health authorities of the United States, the Bureau has formulated certain standards of professional care as being necessary for the protection of the life and health of mothers and babies. These standards are embodied in the following advice:

Medical Care.

1. Select the best physician available and consult him as soon as the fact of pregnancy becomes known. Otherwise he cannot be expected to prevent complications.

2. Ask the physician to make a complete physical examination, including a thorough examination of heart and lungs, abdomen and pelvic organs.

3. If this is the first pregnancy ask him to make pelvic measurements to see for sure that the birth canal is normal.

4. Once a month take to him six ounces of fresh urine in a clean, scalded bottle. From the seventh month on, take this specimen to him once every two weeks.

5. When the urine is taken to the physician ask him to take the blood pressure. Certain very serious complications give warning in the urine and blood pressure in time for the doctor to correct them. If these warnings are overlooked, uremic poisoning and convulsions sometimes occur very suddenly, and other serious results, even death of mother or child, or both, may follow. These can practically always be prevented by attention to the very first symptoms of trouble.

6. When the child is born the doctor will stay until certain that mother and child are comfortable and safe. Any tear of the perineum will be repaired at the time of delivery unless there is some serious reason why it is not safe to do so.

7. He should, if possible, visit the mother and babe every day for the first five days. If everything is all right he may make a call every other day until the mother leaves her bed. Where distance prohibits this service, the woman should, if possible, go to the nearest hospital or to the home of a relative or friend near her physician. The mother and babe should keep in touch with the doctor until the babe is six weeks old. Then he should be asked to make a vaginal examination to see if the pelvic organs are returning to normal as rapidly as they should.

8. The family should ask for this service and be willing to pay a fair price for it. It is poor economy to neglect either mother or babe if good service is to be had at any price.

Dental Care.

Go to a good dentist as soon as the fact of pregnancy becomes known; tell him the condition and ask him to take care of the teeth during the entire pregnancy. The old adage, "For every child a tooth," is a great mistake. A woman who eats properly and takes proper care of her teeth will not lose them. She cannot afford to neglect them from the standpoint of either health or money. It always costs more to neglect teeth than to care for them in time.

Nursing Care.

Next to good medical care the safety and comfort of the mother and babe depends upon good nursing care. A trained nurse should be employed if humanly possible. If a practical nurse must be employed, a woman of intelligence, and cleanly, pleasing personality should be selected.

Beware of women who are superstitious and who know nothing of modern surgical cleanliness. Whether they profess to be midwives, baby nurses, or whether they are even relatives of the family, they are always dangerous.

Whoever is to take the personal care of the mother should early pay a visit to the home, learn where things are kept, go over the preparation of supplies with the mother, and in general make all necessary preparation to step noiselessly into her place when the time comes.

If good medical and nursing care is not available, the woman should go to a hospital if possible.

Household Help.

The expectant mother should begin early to plan for withdrawal from the work of the household. The life of the family should be systematized and simplified to the utmost and the various members of the family should be trained to each take certain responsibilities, and they should do this early enough to relieve the mother more and more as time goes on. There will then be no sudden explosion of disorder at the time, above all others, when order is most necessary.

If it is possible to have hired help, this help should be brought into the home and the routine adjusted in time to relieve the mother both mentally and physically, and give her a chance to gather her mental and physical forces together for her ordeal.

If it is not possible to have outside help, and the family, grandmother or neighbor must do all that is done, the mother should reduce the work to the lowest possible terms by putting away absolutely everything not actually needed and in use. This means ornaments, books, furniture, rugs, clothing, etc. Leave the fewest possible things to clean. Train the family to each take care of not only their own things, but a little more, and plan just what each one is to do and just what the grandmother or neighbor is to do. Go over all this in advance so no one will have to run to the mother when she is ill and ask where things are and how things are to be done.

The ordering of food supplies and general plan of the meals may be cared for some time in advance.

Summary.

In short, the comfort of the family and the mother should be anticipated and arranged for in advance, and the health of the mother should be safeguarded at every step of the way. To do less than this is not economical, is not humane, is not efficient, is not safe.

CHAPTER VI.

HYGIENE OF PREGNANCY.

Diet.

Amount of Food. Among the old adages which are unsafe to follow should be classed the traditional notion that a pregnant woman "must eat for two." Nature takes 280 days to grow a baby weighing about 120 ounces. The pregnant woman has nine suppressed menstrual periods to turn to the building of the child. Furthermore, the ordinary woman is not as active as usual during at least the latter part of her pregnancy, when the child is growing most rapidly. Therefore, we may safely say that the pregnant woman should eat no more than is necessary to keep her strong and well at any other time.

The actual amount should be carefully regulated by the condition and activity of the woman. An expectant mother who is not strong and vigorous to begin with, or who must work hard, should eat an abundance of nourishing, easily digested food. One who is well developed or overweight, or who is living quietly and is not using up much energy, should be extremely careful to not overeat. This is dangerous to both mother and child.

Kinds of Food. The pregnant woman should eat to keep herself healthy. The diet which is best for her at any other time is best for her now. A well-balanced, mixed diet should be eaten unless a special diet is ordered by a physician.

This mixed diet should consist of:

1. *Meat or eggs,* sparingly; not over once daily.
2. *Milk,* freely, both as a beverage and in cooking; also milk products, such as cheese, cottage cheese, buttermilk and butter.
3. *Fruit* of all kinds, generously at every meal, especially fresh and dried fruits.
4. *Vegetables of all kinds,* generously every day, especially fresh, green, leafy vegetables and root vegetables, such as lettuce, celery, raw cabbage, spinach, onions raw or cooked, beets, rutabagas, turnips, carrots, green beans, etc.
5. *Bread and well-cooked cereals* of all kinds, daily, such as oatmeal, rice hominy, corn-meal mush, Graham-meal mush, cracked wheat, barley grits, whole-wheat bread, rye crisp, Graham muffins, corn pones, etc.

What to Eat Sparingly. 1. *Coffee and tea,* if used at all, should not be strong and should be used not over once daily. In general, stimulating foods and drinks should be used very sparingly.

2. *All desserts* should be very simple and only used occasionally to alternate with fruits. Sweets and pastry are unnecessary if fruit of some kind is eaten at every meal. Sugar may be used sparingly to flavor cereals, coffee and tea. Honey and natural syrups may also be used moderately. Too much sweets injure the teeth and cause indigestion.

3. *Meat* should be used with great caution; only small portions, thoroughly chewed, and not over once a day, or better, every other day. The waste products of meat must be eliminated from the body by the kidneys. No unnecessary work should be thrown upon the kidneys at this time above all others.

4. *Pickles, relishes and condiments.* If plenty of fresh vegetables are eaten, especially in the form of salads, such as cold slaw, sliced raw onions, vegetable salads, with either French dressing, boiled dressing or mayonnaise, and if the food is all well cooked and palatable, relishes and condiments will not be necessary in order to make eating interesting.

5. *Women who are fleshy* or who tend to take on fat during pregnancy should eat sparingly of starchy food, fats and milk.

Things Which Should Not Be Eaten. 1. *Anything which is known to disagree with one ordinarily.* Almost every one knows that certain foods are hard for her own stomach to digest, although others seem to eat them with safety. It is foolish to take chances on upsetting the health during this important period by indulging in such foods.

2. *Warm, soft or fresh breads* should not be eaten. Thoroughly baked bread, toast, swieback, rye, corn or Graham breads with heavy crusts are better for the health and teeth. All flour should be very well baked, otherwise its starch is difficult to digest. The use of insufficiently cooked starch and flour tends to cause gas and "heaviness" after eating.

3. *In general, fried, overcooked, undercooked, greasy, overseasoned or overly rich foods* should not be eaten. They overtax the digestive system and give little in return.

4. *Pastry, pie, rich puddings, soda-fountain productions, especially Coca-Cola and candy,* had better be entirely ruled out.

Manner and Time of Eating. 1. The pregnant woman should eat very slowly and chew thoroughly. This is the best way of preventing gas, bloating, "water brash," "heartburn," "fullness" and other discomfort. This makes the work of digestion much easier.

2. Women who suffer from nausea or who find their digestion to be easily upset at this time, or who suffer from a sense of pressure and fullness, do better to eat sparingly at meals and take a light lunch midway between meals, with a glass of hot milk at bedtime.

The normal woman in good health should eat regularly and confine herself to three meals per day.

3. Every woman should be sure to drink plenty of water.

Special Diets. No pregnant woman should undertake to diet herself for the purpose of having an easy childbirth except under definite instructions from a physician. Otherwise she runs a risk of doing injury to herself and her child.

Cravings. Pregnant women sometimes crave pickles or chalk or other curious things to eat. This means that they have not been eating a well-balanced diet; usually it means a lack of food rich in minerals, such as the mother's blood needs in special abundance at this time. This can be corrected by drinking milk to supply lime, and eating freely of fresh vegetables and fruits, especially leafy vegetables, to supply the iron, phosphorus and potash needed in building the wonderful new body of the baby.

These rules are simply the rules which anyone who values health should observe all the time. It is especially important that they be followed during pregnancy. The expectant mother should remember that she must "eat for two" in the sense that her indiscretions will harm not only herself but the dear guest who is dependent upon her bounty.

Exercise, Rest and Recreation.

Amount of Exercise. Exercise is the law of life. Regular activity is absolutely necessary to keep up the strength and work waste matter out of the tissues of the body. It is very hard to keep from getting toxic or poisoned with one's own waste when confined to bed, or when taking too little exercise.

The expectant mother who does not have some complication which makes exercise dangerous to her should lead an active life and keep herself fit and her muscles strong by regular, well-balanced work and exercise which will use every part of her body. She should not overuse any one part of the body, nor should she overwork. She should never go to bed at night so tired that she does not get up perfectly rested in the morning.

Kind of Exercise. *Housework.* General housework affords good, all-round exercise if well planned and if it can be compassed in a reasonable number of hours.

A strong, muscular woman who is accustomed to hard work may even do washing, ironing, gardening and other hard work up to the later weeks of pregnancy, always providing she feels no ill effects.

Work and exercise should be varied. A woman should not sew continuously for a week at a time, nor should she clean house or make garden continuously day after day. She should either give a certain number of hours to each every day, or she should at least alternate days of sewing with days of vigorous muscular strain.

Outdoor exercise. A definite and regular amount of outdoor exercises should be taken every day. There is no tonic like fresh outdoor air. The expectant mother owes it to her unborn babe to give him this chance for vigor.

Exercise for women who do not work. The woman who does not do her own housework, especially the woman who boards or lives in a small apartment, must take special pains to take regular exercises, including deep breathing, arm exercises, bending exercises to strengthen the back and abdominal muscles, and also take daily walks in the open air. All exercises should be begun rather gently if one has been unaccustomed to doing them. At no time should violent or jerking exercises be taken.

To go upstairs properly. A moderate amount of stair climbing is excellent exercise for any woman who is normal and healthy. To go upstairs without fatigue or strain, stand erect and go upstairs exactly as if walking on a level, except for the extra push necessary to hoist the weight of the body to the next step. Do not stoop; do not hold the breath.

Cautions. A woman will not cause the cord to become wrapped around the baby's neck by reaching over her head. Nature has taken care to prevent this by floating the baby in the "bag of water," and by making the cord so long it cannot be pulled on by anything the mother may do. She may, however, cause miscarriage by overreaching or overstraining in any way. Therefore, she should not reach, lift heavy loads, run, or do anything else to excess. She may, however, sleep with her arms over her head, take dishes from the upper shelf, or do anything which will not cause a sense of strain.

A woman may ride moderate distances in carefully driven cars or vehicles, over smooth roads, but there is great danger of producing miscarriage by jolting or jarring if driven too fast, too far or over rough roads.

Rest. The pregnant woman should break her day's work with frequent short periods of rest. She will get just as much done and will be less tired at the end of the day.

If her work is such that she must "be on her feet" a great deal, it is especially important that she drop down flat on her back on a bed or couch, or even on the floor, with her feet up on a cushion or small box or foot of the bed, for five minutes every hour or two during her workday. This will do much to prevent varicose veins and swollen feet and legs, and will bring her through the day with much less fatigue.

Sleep. The pregnant woman should get an abundance of sleep, always in a comfortable bed and in a room with very fresh air, or, better still, on a sleeping porch.

If her rest is unavoidably broken by younger children, or if she must get up early and does not go to sleep readily at night, she must plan to take a nap after the noon meal. She can often do this by lying down while the toddler takes his nap.

It should be a matter of conscience with the expectant mother not to let herself get too tired or lose sleep. Fatigue and loss of sleep poison the blood just as definitely as disease or bad food.

Recreation. *A pregnant woman should resolve to be happy in spite of everything.* She should give herself every possible pleasure in the way of social relaxation, and after she has made sure that she is becomingly and suitably dressed, she should go about freely to church, entertainments, visits, etc., always avoiding excitement, late hours and fatigue.

We are growing away from the old idea that a pregnant woman should not be seen. One of the inspiring sights at a national scientific meeting a few years ago was a woman with a perfectly radiant face and great dignity of manner who read a paper before this notable body just six weeks before giving birth to twins.

It means everything to a family to have a mother who can keep her poise and cheerfulness during this trying time, and it has much to do with keeping up her own courage and strength.

She should not feel selfish in taking enough pleasure and giving herself enough indulgence to make her able to throw off depression and keep herself and all around her happy.

Marital Relations.

The question is very often asked as to whether sexual intercourse should occur during pregnancy, and if so, how often. There is no positive authority on this question, but all medical authorities agree that it should certainly not occur at or near the dates on which the woman would expect to menstruate were she not pregnant, as miscarriage is especially likely to occur at these times.

Any woman who has had a miscarriage, especially if given to having repeated miscarriages, should refrain from marital relations during her entire pregnancy.

Normal, healthy married couples should settle the matter of sexual relations during pregnancy to their mutual satisfaction. It should certainly be indulged in with moderation, if at all, and most certainly should never be forced upon the expectant mother.

For certain biological reasons, the justice of which we can but dimly understand, the hardships of childbearing fall chiefly upon the woman. The man can even things up a little by being as considerate and self-denying as possible during this period of physical, mental and nervous strain upon his partner in the important business of perpetuating their family.

Clothing.

Clothing for the Mother. *Dress.* The pregnant woman should carefully plan her special wardrobe so she may have perfect freedom of every part of her body and at the same time appear neat and presentable. Everything should be hung from the shoulders, and skirts and dresses should be adjustable, so that they may be made to serve during the entire period. The popular one-piece dress, with elastic shirring at the waist and a slip-over panel back and front, makes a very tasteful maternity gown. A loose cape or coat wrap is a necessary part of the outfit.

Underwear should be of the union-suit or one-piece style. It should be selected according to the season and the circumstances of the woman, and need not be different from that usually worn by her.

Shoes should be broad heeled, straight on inner side, and broad toed. They should be thoroughly comfortable and make walking as easy as possible.

Corsets should never be worn for appearance. Nature has left out all ribs in the abdomen and put in their stead a very wonderful arrangement of abdominal muscles, which should have been trained in the growing girl and all through womanhood for this very important service in childbearing.

Once in a long time a woman has such very bad abdominal muscles and such a bad posture she cannot carry her child without help. A properly fitted maternity corset will help to support this extra weight, but it tends to weaken rather than strengthen these muscles for their work in labor. A well-fitted elastic or cloth binder is really better than a corset when support is necessary.

The Baby's Layette. An infant's first outfit may be simple and inexpensive, or elaborate and expensive, according to the desire and circumstances of the mother. In general, the garments should be very simple and easily washed and ironed. It is a great mistake to use a helpless, unconscious infant as an object of display. Everything should be planned with direct reference to his comfort and well-being.

The following is a minimum outfit. It may be more generous in number of pieces and finer in texture if circumstances permit. The number of pieces should be sufficient to make it possible to keep the baby always sweet and fresh. The frequency and ease with which the laundry work may be done determines in the main the number of pieces necessary. The following list assumes that diapers and underwear may be washed frequently, while the outside slips are only washed once each week.

Three abdominal bands, about 7 inches by 18 inches; torn from fine, firm flannel and not hemmed. A half yard of 22-inch flannel may have the selvage torn off, then be torn in three equal strips.

Three Reuben shirts, size 2; silk if possible; then silk and linen, silk and wool, or cotton and wool mixed. The Reuben style crosses over the chest and fastens in the back by two tabs with a small safety pin. This style adapts itself to the size of the child as it grows, is easy to fasten, and fits without wrinkles if properly put on. Nonwrinkling tape may be used instead of buttons, if preferred.

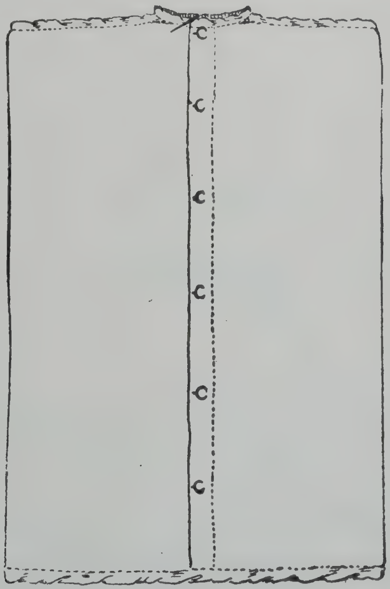
Three flannel skirts, "Gertrude" style, which is a one-piece, sleeveless princesse, fastened by a button or tapes on each shoulder.

Three nightgowns, made of soft outing flannel if a summer baby, or soft wool stockinet or Arnold cloth if a winter baby; made long, with a drawstring in the hem.

Three dozen or more diapers, made of good quality bird's-eye cotton, torn 20 by 40 inches and hemmed by hand. This cotton should be thoroughly laundered before being used.

Eight outside slips, of nainsook or Persian lawn or soft dimity, made kimono style and with little or no trimming.

First cloak—a sleeveless square slip with hood attached. May later be shaped into first short coat. Eider down with silk lining is ideal for a cold-weather baby; any soft cashmere or other wool if a summer baby.



Baby's first wrap.

Gertrude skirt.

Kimono dress.

The knit band should be substituted for the pinned band as soon as the navel heals.

Soft merino stockings, three pairs.

Carriage blankets, according to climate.

Three knitted bands should be purchased and substituted for the torn strips as soon as the navel is thoroughly healed and the child's abdominal muscles seem strong and normal.

A couple of small flannel nightingales or crocheted jackets will be found very useful to slip on at times when the room is cool.

The Style and Manner of Making. The following rules should be rigidly observed in making the layette: Have as few seams as possible. Use simple kimono patterns without yokes and as nearly one peice as possible. Use no trimming on necks or any place where it can possibly feel rough to the delicate skin of the babe. Instead of buying lace and trimming, spend that much more for fine, soft material. Instead of tucks and embroidery, spend that time in finishing seams and bands by hand with exquisite neatness, using great care that every edge and seam shall be perfectly soft. Machine-made bands are often stiff, and sometimes rough. The seams of the nightdresses should all be open on the right side and catch-stitched down with fine thread, leaving the entire inner surface soft and smooth. The kimono style is good for all the first garments, because this does away with the arm seam and simplifies the making. The sleeve may be drawn up at the wrist with a soft, silk-faced casing, or a hem and a fine ribbon or silk tape.

In general, the clothing of both mother and babe should be simple and tasteful, but not elaborate. It is a great mistake for an expectant mother to spend so much time making a beautiful layette that she does not take time to go into the open air and take the exercise and recreation and rest which are necessary if she is to build for her child a beautiful body.

Care of the Person.

Bathing. A daily morning sponge bath, shower or quick plunge in a tub is most refreshing, stimulates the circulation, improves the appetite, and makes one less liable to take cold. The temperature of the water should be agreeable to the individual; tepid to cool is preferable. It is the wetting and the rubbing which do the work of seasoning and stimulating the skin.

In addition to the morning rub, a warm soap scrub should be taken a couple of times during the week, preferably at bedtime.

Much waste is eliminated through the skin if it is healthy and active. This relieves the kidneys of part of their load.

It makes the complexion fresher, and even the mind is more cheerful, if one has a fastidious sense of bodily cleanliness and freshness.

Care of the Teeth. The teeth should be carefully brushed at least twice daily, using salt and soda or milk of magnesia in order to counteract the tendency to acidity which is often present during pregnancy.

Care of the Breasts. During the last two months of pregnancy special attention should be given daily to the thorough bathing of the nipples with soap and hot water, using a moderately stiff nail or flesh brush. Follow this with cold application and massage. If the nipple is very small or inverted it should be pulled out and shaped and rubbed in order that it may be more convenient for the baby to grasp it. A breast pump, if necessary, may be used to draw out the nipple.

Care of the Adbomen. The skin of the abdomen becomes stretched during the later stages of pregnancy, and sometimes breaks into "striæ" or scars, which remain as a disfigurement. In some cases the muscles remain lax and soft after delivery, and we say the woman has "lost her shape." Something can be done to prevent both these effects of stretching by rubbing the abdomen every evening after retiring, or every day after the bath, with cocoa butter or cold cream or other lubricant, but the effect is probably chiefly due to the rubbing. If the muscles are much overstretched a well-fitted muslin binder worn during the last month or six weeks of pregnancy will take some of the strain from these muscles.

CHAPTER VII.

EQUIPMENT.

Nursery Equipment.

Bed or basinette. A new clothes basket or splint delivery basket makes an ideal bed for the first six months. This may be nailed to the seat of an old chair without a back and the whole thing painted white. A fitted muslin lining which may be removed, with a wide flounce of dotted Swiss around the edge, makes a basinette dainty enough for any baby.

A rather small pillow may be carefully crowded into this basket so as to give a smooth, flat surface.

A piece of oilcloth or rubber sheeting should be placed over the pillow.

A thin mattress should next be made by folding a piece of table felting or quilted mattress padding, or even a piece of very clean old quilt, to fit the basket. This gives the smooth, firm surface desired, and is easily washed and renewed.

Four blankets, made from tearing a soft old woolen blanket into quarters and binding or crocheting the edges.

Four small sheets, torn and hemmed from an old thin sheet.

Half a dozen large soft old towels. If these are not found in the family linen, they may be made from wide diaper cloth.

Four wash rags may be made of shaker flannel or bird's eye or from an old towel.

A hot-water bag with a flannel cover. (The family bag may be carefully scrubbed and cleaned and fitted with a dainty cover in honor of this service.)

A low chair without arms. The legs of any chair may be sawed off and the chair painted to match the basinette, if so desired. A low sewing rocker makes a very comfortable mother-and-baby chair.

A folding sewing table or other table, with the legs sawed to make it a convenient height for holding the bath things while the mother sits in the low chair. This also may be painted white. A folded cotton blanket or a heavy bath towel should be provided for the top of the table.

An enameled foot tub or infant's bathtub.

A reliable scale for the weekly weighing.

An enameled pitcher and hand basin.

An enameled tray, holding: Castile or Ivory soap in a celluloid box; fine talcum powder; boric-acid solution, boiled and strained through cotton; tube of sterile vaseline or other lubricant; small jar of applicators, made of toothpicks wound with cotton; package of sterile dressings for cord; small and large safety pins.

A low drying rack for the diapers and bath things.

Drying frames for stretching the woolen stockings and shirts.

The Mother's Equipment.

If it is left to the mother to prepare all the necessary equipment, she should have the following things on hand in addition to the regular household equipment for illness:

1. One or two pounds absorbent or surgical cotton; ten yards cheesecloth or surgical gauze or dairy cloth; two rolls cotton batting.
2. If the items in paragraph 1 are prohibitively expensive, provide a large supply of clean old rags for making sanitary pads, with a quarter-pound package of surgical cotton for the small wipes.
3. If the abdominal binder is to be worn, two should be torn from heavy-weight muslin, about 16 by 40 inches, longer if the woman is large.
4. A generous supply of hand towels, at least one dozen. The new diapers may be sterilized and used if the family supply of linen is short.
5. Two or three hand basins or wash bowls.
6. Two pitchers for holding hot and cold sterile water.
7. One slop jar, bucket or foot tub for receiving waste; one basin for the afterbirth.
8. Large pile of newspapers.

From the home medicine cupboard the following things will be used; bed pan; irrigating or enema can or fountain syringe; rubber sheet or square of oilcloth; hand brush; sterile vaseline; bichloride of mercury or carbolic or lysol solution; clinical thermometer.

Preparing Supplies. From an old sheet tear pieces suitable for pinning the following into packages:

Three sheets, each wrapped separately; three pillowcases in one package; six packages of two towels each; twelve packages of four sanitary pads each.

One package containing fifty cotton pledgets or "wipes" for use during labor to sponge away discharges.

One package of four-inch gauze squares for dressing the cord.

Two nightgowns, wrapped separately. One pair of long stockings may be wrapped with one gown.

Six small or two large pads, wrapped separately, for protecting the bed during delivery.

Sanitary pads. Sanitary pads may be made from the cotton batting cut into sections, 4 by 8 inches, faced with a layer of absorbent cotton cut the same size, as the cotton batting will not soak up discharges. The cotton is then wrapped in pieces cut from the gauze, cheesecloth or dairy cloth and made 10 to 12 inches long.

In the absence of the cotton, ordinary menstruation napkins may be folded as usually worn, and each one covered with a layer of old muslin. If there is an insufficient supply of these, old rags and muslin may be freshly boiled and ironed and made into pads of approximately 4 by 10 inches.

Delivery pads. A piece of mattress padding or table felt four and one-half yards long may be purchased and cut into six pieces and bound. These may afterward be thoroughly laundered and used for the baby's bed. Or the pads for protecting the bed may be made from layers of the two kinds of cotton "tacked" between layers of cheesecloth. These may be made a yard square, and two will usually be sufficient. In an emergency pads may be made of many layers of newspapers basted between muslin and thoroughly ironed on both sides with a very hot iron.

Pledgets or "wipes" are made from either gauze or cotton loosely shaped into a mass the size and shape of an egg. The raw edges of the gauze are tucked in, and if made of cotton it is shaped and twisted into a rather firm, round mass. There should be a generous supply of these for wiping away blood and discharges and for use in case it becomes necessary to sew up a tear in the perineum. These also may be made from small pieces of soft old rags.

Small pledgets are made by picking off and shaping small bits of cotton and dropping them in a pint Mason jar which has been boiled. These are useful for washing the nipple before and after nursing, and the baby's eyes in making the daily toilet.

Swabs are made by winding bits of cotton about the ends of toothpicks. There should be a jelly glass full of these.

Old rags. A fund of freshly washed rags should be tied loosely in a pillowcase and baked for an hour in a slow oven. These come handy for many purposes at confinement.

Sterilizing. Arrange as large a table as possible by padding all over with a clean old blanket or quilt; cover this completely with a freshly laundered sheet. Scrub the irons with soap and water, especially the handles; use a freshly ironed towel folded for an iron holder. Place all the supplies to be sterilized on a chair or table at one side. Now put on a freshly laundered dress or large apron, scrub the hands thoroughly with a stiff brush, soap and hot water. Take several rows of pins from a paper, place them in a dish, and bake them in the oven.

First run the iron over the entire table in order to sterilize the working surface. Now iron the pieces of old sheet which are to be used as covers, and pile them up on the back of the table. Then iron the towels, and as soon as two are ironed pin them up in one of the pieces of sheet, making a neat package, and so on until all the articles have been ironed and pinned up, remembering to bury all but the head of each pin in the package. *Use an iron as hot as can be used without scorching, and rub it over and over each article, ironing it several times on each side.*

Arrange that there may be no interruption while doing this, and *do not touch anything whatever except the iron and the supplies.* When done the supplies will be arranged in a neat pile of packages on top of the table. Now fold the ironing sheet over the whole thing, pin compactly and put away until needed. Do not open this package for any reason whatsoever. The nurse will open it at the time of confinement.

This sterilizing should be done two or three weeks before confinement is expected.

The gauze or cotton pledgets, swabs, safety pins, and everything which cannot be sterilized by ironing, should be placed in Mason jars, covered jelly glasses or other suitable containers which have been boiled, covers and all, and dried with dry heat. When filled they should be placed in an oven and kept at a low baking heat for an hour.

The Federal Children's Bureau, in the pamphlet on "Prenatal Care," gives the following directions for sterilizing supplies:

"How to Sterilize. It is possible to sterilize the dressings in the oven, but as dry heat is less effective than moist heat, and there is danger of scorching by this method, it is better to use steam. To accomplish this, the smaller things may be sterilized in a large kettle or saucepan, and the larger ones in the wash boiler. For the first, invert a bowl several inches high in the bottom of the kettle. On this bowl lay a plate, and on this place the dressings. They may be put into a cheesecloth bag for ease in handling. Let the water just cover the bowl, and cover the kettle tightly. The articles should remain for one hour after the water begins to boil. To sterilize in the boiler, a convenient method is to suspend the dressings in the steam by means of a hammock made of stout muslin, which is merely a strip somewhat longer than the boiler, so that it will hang down to about a third the depth of the boiler. It must be fastened securely to the handles of the boiler by means of a stout drawstring run through each end, and, for additional security, down each side as well. The boiler should be filled about one quarter full of water. If the dressings are placed in loose, cheesecloth bags it will facilitate handling them. After the articles have been put in the hammock the boiler cover should be put on and the articles left to steam for an hour, when they may be removed and dried thoroughly in the sun by pinning the bags to the clothesline, or, if that is not possible, they may be dried in the oven, being very careful not to burn them. They are then to be put away in a closed drawer until needed."

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CHAPTER VIII.

THE BIRTH OF THE CHILD.

Signs of Approaching Labor.

1. **"Lightening."** About two weeks before labor the child settles down into the basin made by the hip bones, called the pelvis. The woman's shape changes; the upper part of the abdomen becomes smaller and the lower becomes larger. She breathes more easily and "feels lighter," but walks with greater difficulty. She is apt to have a return of constipation and frequent urination, due to pressure, such as she had before the child rose out of the pelvis at four and one-half months. The process of stretching the muscles and ligaments and getting ready for the birth of the child really starts at this time.

2. **"False Pains."** Some women have irregular and occasional pains, with contraction of the uterus, for some time before labor really sets in. Sometimes these will occur for from one to four weeks before labor. If they are occasional and occur at irregular intervals they are probably "false" pains. It is well to report these to the nurse and the doctor, however. If they come regularly and last some time it is better to be on the safe side and call the doctor or the nurse.

3. **"The Show."** During pregnancy the mouth of the womb becomes plugged with mucus. When the birth canal begins to enlarge or dilate for the passage of the child, this plug of thick, white mucus, tinged with blood, comes away. This is usually a sign that it will not be many hours before the baby is born.

4. **"The Bag of Waters."** The child is surrounded during all its intrauterine life by a sack of thin membrane filled with a clear fluid. When labor approaches, this sack, filled with fluid, is pushed into the birth canal ahead of the child. This gently dilates the soft parts and is a great help. When this sack ruptures too soon this gentle dilation does not take place, and it is called a "dry birth." Labor is apt to progress more slowly when this occurs.

5. **Pains.** True labor pains usually begin with slight pains coming on every ten or fifteen minutes. These gradually increase in frequency and severity until they occur every one to three minutes.

The Stages of Labor.

1. **The First Stage of Labor.** The time which elapses from the first pains until the womb is fully dilated and the child is ready to come through the bony passageway is called "the first stage" of labor.

2. **The Second Stage of Labor.** This is the term used for the time it takes for the child to be born after the first stage is over.

3. **The Third Stage of Labor.** This is the time it takes for the afterbirth, or placenta, to come away.

The Time of Each Stage. The first stage lasts longer with the first child, as the tissues are less elastic and have never been stretched so far before. In primipara, or women having the first baby, this stage takes an average of fifteen to seventeen hours. In a multipara, or a women who has borne other children, it may last but a few hours.

The second stage in a primipara usually lasts from one to two hours. In a multipara it may only last a few minutes.

The afterbirth usually comes away in from ten to thirty minutes; but may not come for an hour or longer.

Afterpains.

The uterus or womb should contract at once into a round, hard mass about the size of the child's head. This can be felt through the abdominal wall. This is nature's way of stopping the bleeding from the surface where the afterbirth was torn away. If the muscles in the wall of the womb do not draw up the woman may have a severe hemorrhage.

The nurse should watch this by grasping the womb through the abdominal wall frequently during the first twenty-four hours, to see if it feels hard. If it should flatten and feel soft she should rub and squeeze it until it draws up into a hard lump again. Also, when the child sucks the breast the uterus contracts. This is one reason why the child should be put to the breast regularly from birth. These contractions are more or less painful, and are called "afterpains."

Preparation for Labor.

The Room. The room to be used should have been thoroughly cleaned and kept in order for some time. Places should have been found for things which will not be needed. The belongings of other members of the family should be removed. For two weeks this room is to belong exclusively and absolutely to the mother. If necessary the nurse and baby may also share it. It is much better, however, for the nurse and baby to occupy an adjoining room. When labor begins the birth chamber should receive a final setting in order. The supplies should be laid out on a table in their packages. The bowls and pitchers should be washed with hot soapsuds and wiped all over with a piece of gauze wet in the five per cent of carbolic-acid solution or other antiseptic. They should then be arranged on another table.

The room and furniture should be wiped with a clean, damp cloth. The light should be put in order, and a strong extra light made ready in case it is necessary to deliver the baby at night.

The heat and ventilation should be carefully arranged. The baby's blankets, first clothes, bath equipment, the boric-acid solution for its eyes, the vaseline or cold cream for its first greasing, may all be laid out in an adjoining room, or wherever the nurse plans to give the baby its first bath.

The Bed. Place a mattress pad or folded quilt over the mattress, then the sheet; fold under at the corners and pin to the mattress underneath with large safety pins, taking several stitches with each pin, so it will not tear either mattress or sheet.

Across the middle of the bed place the piece of rubber sheeting or oilcloth, which is kept in the home medicine closet, but which should have been wiped on both sides with an antiseptic solution. Place over this a clean sheet folded once lengthwise. Fold the ends well under the mattress and pin with other safety pins. This is a drawsheet. The patient's hips should come about the middle of this sheet. It is much easier to change this sheet often than it is to change the sheet over the entire mattress.

Over all this should be spread a large piece of oilcloth and another clean sheet, which will be slipped out from under the mother at the end, leaving her on a perfectly clean permanent bed. The package of pads for protecting the bed may be placed near. The pan or jar for waste may be placed on the floor just under the edge of the bed. A basin should stand by the side of it for receiving the placenta or afterbirth. Everything brought into the room should be absolutely clean and sterile.

Preparing the Patient. As soon as labor is known to have begun the patient should take a large soapsuds enema. She should use a slop jar and not the toilet, as babies have been dropped in such places. She should empty the bladder frequently.

(*Caution:* A vaginal douche should never be used either before or after confinement without explicit orders from a physician.)

She may then take a thorough sponge bath, or this may be given to her by her nurse. She should not get into a tub, because she may infect the birth canal with the water in which the body has been bathed.

The hair should be parted and braided in two braids, firmly tied at the ends. She may then put on a clean nightgown, her bedroom slippers and kimono. She may occupy herself in any way she likes in moving about and attending to small concerns, which may make the trying time pass more rapidly. She should eat and drink as if nothing were the matter, except that the food should be easily digested and of a moderate quantity.

The nurse should come early and have everything in readiness. Up to this point the expectant mother and the family may have arranged things. The family should also scrub a boiler very clean inside and out and put it on the stove filled with clean water. When this has really boiled for five minutes a couple of large sterile pitchers should be filled, covered with a perfectly clean towel and placed where they will cool. Plenty of hot water should be kept on hand. If a teakettle can be spared or an extra one borrowed, it may be put on to boil, then set aside to cool. This is even better than a pitcher.

The nurse should further prepare the patient by scrubbing the inner surfaces of her thighs, the abdomen and private parts with a brush and soap. She should then take a pair of sharp shears and clip the hair as short as she can. This makes it very much easier to keep things clean both during and after labor. The nurse should next wash all parts which are to be exposed with an antiseptic, such as 5 per cent carbolic, 3 per cent lysol, or 1 to 5,000 bichloride solution. She will then put a sterile pad over the vulva and fasten it back and front to a bandage belt.

When the Doctor Comes. The nurse should bring a basin of hot water, soap and hand brush and nail file and let the doctor first scrub his hands outside the birth chamber. She should then have a sterile gown or sterile sheet ready to cover his clothing and a basin of disinfectant for his hands. When he has made the first examination the nurse should have water, soap, brush, disinfectant and towel again ready for his use. If he uses rubber gloves she will sterilize these after each using.

The doctor and nurse should then look over the equipment and see that everything is ready and that the nurse understands the doctor's methods and desires.

It is well to have the family instructed as to the regulation of fires, keeping water hot, preparing a lunch for the doctor and nurse, if labor lasts through the night, etc.

During the second stage of labor the woman will want to pull and push to supplement her muscle strength. A clean sheet tied to the foot of the bed so she may pull on the knotted ends is an old procedure which is still about as good as anything. Sometimes a woman will want her husband to sit back of her and support her through her ordeal. He should take off his coat, roll up his sleeves, scrub his hands and arms and put on a clean surgeon's gown or nightshirt, or have a clean sheet pinned over his clothing or wear a clean pajama suit.

The proper way to use a sheet for an apron is as follows: Hold the sheet up so that the middle crosswise crease will drop from chin to feet of the person who is to wear it. The sheet is folded over at the top so it will just clear the feet at the bottom. It is then brought smoothly around under the arms and the upper corners crossed in the back and brought over the shoulders and pinned to the front; that is, the right upper end of the sheet is pinned to the sheet in front of the left shoulder and the left upper end in front of the right shoulder. This can be done in such a way that part of the sheet falls over the sleeve and arm. When properly adjusted one can move around as freely as if wearing a real apron.

Delivery.

When the second stage of labor begins the nurse removes the patient's kimono and slippers, throws a sterile sheet around her, under which she neatly folds up her nightgown, or else replaces it with a short gown, such as the jacket of a pajama suit. She then places the patient on the bed with the sterile pads under her and the sterile sheet over her. The nurse should now put the stockings on her which were sterilized and pinned up with one of the gowns.

When the moment for delivery comes the nurse and doctor may swing the patient around crosswise of the bed with the basin below to catch soiled cotton, gauze, etc. The knees are bent so the feet rest flat on the bed close to the body. The doctor may prefer to have the patient remain in the ordinary position, without change. The nurse will now remove all soiled dressings, sponge the parts with antiseptic and throw a clean towel over them, and spread a clean towel under the hips.

As soon as the baby's head is born the nurse should quickly wipe the mucus from the mouth with a bit of sterile gauze and wash each eye with a separate piece of gauze wet in boric-acid solution. As soon as the cord is cut the nurse should cover it with a piece of sterile gauze; the nurse takes the baby, wraps it in a soft piece of old toweling, then in a warm blanket, and lays it on its right side in a warm, safe place, while she helps the doctor with the mother. She again tidies up the patient somewhat and places her in a comfortable position and allows her to rest until time for the afterbirth or placenta to come away, when the pains will start up again for a few minutes.

This is the nurse's time to give the baby a little further attention. She looks it over carefully to see if it is normal every way, and shows it to the doctor for confirmation of her judgment. The doctor will now drop the prophylactic in the baby's eyes. She greases it all over thoroughly with olive oil, vaseline or cold cream to soften and loosen the sticky, cheesy coating with which most babies are covered when born. She again wraps it up and makes it comfortable until after the mother is entirely through and settled to rest.

After the afterbirth has been delivered and the doctor has pronounced everything finished, the nurse quickly sponges off the exposed parts of the body, removes soiled pads, places a sterile dressing over the vulva, adjusts the binder and pins the dressing to it back and front. She then slips the top sheet and oilcloth from under the mother, leaving her in the clean, well-made bed underneath. She places a hot-water bottle at her feet, gives her some hot milk or other nourishing drink, adjusts light and ventilation and lets her take a much-needed rest.

Repair of Tears.

When the perineum is torn during the delivery of the child, the physician will sew this up before the nurse adjusts the dressing. The patient should be placed crosswise of the bed, and a very good light will be needed. The nurse will cleanse and prepare the parts for this as directed by the physician. *It is very important that all tears, even small ones, be repaired as soon as they occur. This saves ill health and hospital and surgeon's fees later.*

Tying the Cord.

It occasionally happens that the doctor does not reach a country mother until after the baby is born. This is naturally terrifying if no one is present who knows what to do. The important thing is for every one to keep cool and realize that this is a sign the birth is probably a normal one and that nothing is going to happen to either mother or babe. The first thing to do is to see that the baby breathes, and the next is to place it on its side, facing the mother, near enough to not stretch the cord but out of the way of the discharges. Wrap the baby in a warm towel and blanket and wait until the afterbirth comes away. Make the mother as comfortable as possible and watch the baby closely; also watch the mother for hemorrhage. The afterbirth usually comes away in twenty to thirty minutes, but it may take longer. In case the expulsion of the afterbirth is delayed or the condition of mother or babe indicates haste, the cord may be cut as soon as it stops pulsating or beating.

In the meantime boil two pieces of soft, strong cord or small tape about six inches long, and a pair of shears; lay on a clean plate in a hot oven and dry.

When the afterbirth has come away, scrub the hands well with soap and hot water, tie the cord firmly, wrapping the string twice about the cord, and tying with a sailor's knot or three common hard knots. Do not cut the string too short.

Tie once about two inches from the body and again about three inches from the body or an inch from the first tie. Cut the cord between these two knots with the sterile shears, place a piece of sterile gauze over the stump, *and do not touch the stump of the cord.*

The Baby's First Bath.

The water should feel pleasantly warm to the bare elbow of the nurse. The nurse spreads a bath towel covered with an old soft linen towel over the bath table. She carefully wipes off the grease, carrying with it the cheesy covering of the skin. She should first wash and wipe the baby's face and head, taking care not to get soap in the eyes. She then bathes the body thoroughly and wraps the towel loosely around it while she pats it dry, taking especial pains to dry each fold and wrinkle of skin. Sometimes the doctor will advise that the baby be cleaned with oil for the first time and not be bathed in water. If the baby is not in good condition this is always advisable.

The Cord. The nurse dresses the cord by cutting a hole in a pad of sterile gauze. She bathes the baby and applies the dressing without touching or exposing the cord, if possible. If it has been exposed she sponges the cord with alcohol or other antiseptic, dries it carefully with dry, sterile gauze, slips the cord through the hole in the gauze, covers it with another piece and adjusts the baby's band. *Grease or salve or powder of any kind should never be put on the cord.*

To adjust the band place it under the baby, lap smoothly in front and pin with small safety pins placed close together, beginning at the bottom. Pin to fit the shape of the body, and fit without wrinkles; at the same time it must not be tight. With a plump, round baby it is sometimes necessary to pinch up little darts at the lower edge and fasten with safety pins.

If the cord is dry and sterile when dressed it should not need to be redressed until it comes off at the end of six or seven days. The baby must not be put in a bath until the cord drops off and the stump has healed. Of course it must receive a sponge bath every day. If there should be any discharge from the cord it must be redressed, and this condition should be reported to the doctor.

After the cord drops off a pad of sterile gauze will be kept over the stump until it is entirely healed.

The First Nursing.

The baby should be put to both breasts for a few minutes each as soon as the mother has had a sleep and a chance to recover herself.

When the baby is brought to nurse the nipple should be washed with boric-acid solution or boiled water. The mother should turn on one side and have a pillow thrust firmly against her back to support her. If it is not desirable to have her turn completely on her side the baby may be placed on a pillow so she will not have to turn so far.

Registering the Birth.

Before the doctor leaves the house he should fill out the birth-registration certificate. The father should always give the necessary information and see that the physician does not forget to do this. It is the father's business to see that his newborn child is promptly registered as an American citizen.

Post Partum Hemorrhage.

In chapter IX it is stated that the uterus should contract like an overstretched rubber bag when emptied by the birth of the child. This is nature's way of stopping the bleeding when the afterbirth comes away from the wall. The nurse should watch closely that this does not relax while the patient is asleep or resting. In this case violent hemorrhage may set in. The nurse can prevent this by grasping the uterus through the lax abdominal wall and kneading it vigorously. If this does not cause it to draw up, a cold, wet pack or piece of ice may be rubbed over this part of the abdomen. Putting the baby to the breast will nearly always make the uterus contract.

If these efforts do not bring quick results send for the physician with all haste. While he is coming raise the foot of the bed by placing a chair or other piece of furniture under it. Raise it until the feet of the patient are considerably higher than the head. Keep the baby at the breast and keep kneading the womb through the abdomen. If promptly and persistently carried out these measures will rarely fail.

CHAPTER IX.

AFTER CARE OF THE MOTHER.

The Lying-in Period.

Quiet. The most important thing in the world for both mother and babe is rest and quiet. Every organ in the mother's body must readjust itself after the severe strain of labor. Her nervous system must recover from shock and pain. She will take it for granted that everybody is glad she is safely through the ordeal and that she has a fine boy or girl.

Friends who are wise and kind will show their good will by messages, flowers and thoughtful assistance to the household, but will not expect to enter the sick room while the mother is in bed. Friends who are not this thoughtful or who do not appreciate the importance of keeping both mother and babe quiet must be tactfully kept from entering the room and from talking outside within the mother's hearing.

Likewise the baby should not be handled and exhibited to all comers. It needs only warmth, quiet, fresh air, and clothes that do not wrinkle or pinch.

Length of Stay in Bed. After the birth of a child the uterus is a big, muscular sac which weighs about two pounds. Within five to seven weeks it should shrink to about two ounces. If it does not do this the ligaments will be unable to hold it in place and the woman will have "falling of the womb" or "bearing down." The mucous membrane will be unhealthy or congested, causing leucorrhœa or "whites," and she will have the dragged-out feeling characteristic of this kind of female trouble. This reduction of the womb to normal size is called "involution" of the uterus or womb. When it remains large and heavy it is called "subinvolution."

The chief causes of this condition of subinvolution are getting up too soon and general weakness. The uterus usually takes longer to return to normal after the first baby than after later births. Most physicians advise two weeks in bed after the first confinement and ten days after later confinements. Involution goes on more rapidly with women who nurse their babies than with those who do not. If there are complications, or if a woman does not get her strength back and feel like getting up at the end of the specified time, she should stay in bed longer, with very careful attention to nourishing food and an abundance of sleep.

It is worth everything to the family and to the baby, to say nothing of the mother's own health and happiness, to have her get up well and strong. Family and friends should make every effort and any necessary sacrifice to start mother and child out well.

Especially should all knowledge and sound of household troubles be kept from the tired mother. Hearing "things go wrong" is more exhausting than hard work, and worry while nervous and weak from the ordeal of labor may easily keep a woman much longer in bed, and is especially apt to affect the milk supply and thus also injure the baby.

Personal Care of the Mother.

Air, Light and Warmth. The mother should occupy the quietest, most pleasant room in the house. This room should be light and well ventilated. Sunshine and fresh air are necessary to both mother and child. The room should be kept at not over 65 to 70 degrees. It is weakening to lie in a hot room. The old method of keeping mother and child in a hot, dark, stuffy room to prevent them from getting chilled was the surest way in the world to keep them weak and make them highly sensitive to chilling.

Both mother and babe must be kept warm, of course, but this must be done with warm lightweight blankets and hot-water bags, if necessary, rather than with heavy covers and hot, stale air in the room.

The room need not be darkened except while the mother naps. However, the eyes of both mother and babe should be shaded *at all times* from direct light.

In warm weather keep all windows freely open and in cold weather keep all windows down from the top. Even in the most severe weather a little crack should be left at the top at all times, to make sure that the air in the room will not be stagnant and that it will be constantly changing from the top, where the hottest, stalest air is always found.

The patients may be protected from a direct draught by some kind of a screen. A blanket over two chairs or over a clothes-drying rack does very well.

Diet. The nurse should ask the physician to give directions concerning the feeding of the mother during lying-in. If this is left to the nurse, the following is about what is usually recommended for normal cases:

For first twenty-four hours, semiliquid diet, milk, malted milk, cocoa, tea, milk soups, junket, toast, milk toast, poached egg and fruit. She may have nourishment every four hours.

After the mother has recovered from shock and fatigue she may receive light general diet, including, in addition to the articles mentioned, cereals, custards, rice, hominy, fruits of all kinds, vegetables of all kinds (except those likely to disagree, such as cucumbers, overcooked cabbage, navy beans, etc.), crisp bacon, chicken, fish, lamb or choice beef, simple puddings, etc.; in short, she may follow in general the diet suitable for pregnancy.

The lying-in mother should take great pains to chew thoroughly, eat slowly and keep cheerful. These have quite as much to do with good digestion and the important matter of making good milk for the baby as does the selection of food.

There is no danger of the mother giving her baby colic by eating certain articles of food. What agrees with her will agree with the baby, and what disagrees with her will affect the baby in the degree that it upsets the mother's health.

Bowels and Kidneys. If the bowels do not move by the third day a dose of castor oil or other mild cathartic should be given. The doctor should advise as to how long the bedpan should be used. If there is no tear and the birth was normal, many physicians permit a woman to get up to commode or slop jar after the third day. *This should never be done without the doctor's permission, however, as in certain conditions it might be extremely dangerous.*

The nurse should see to it that the patient's bowels move every day after the third day. The best time for this is after breakfast and just before her bath. A little soapsuds in a fountain syringe may be injected into the bowel to start the movement at a regular time until the patient becomes accustomed to using the bedpan at a regular time. Do not wait for the patient to ask for the bedpan, but see to it that her bowels move daily at a regular time.

Give the bedpan regularly for urination and keep a record of the approximate amount of urine passed. An ordinary coffee cup or glass tumbler holds about eight ounces, or half a pint. Pour a number of cups of water into any convenient gallon container, such as an old pail or a tin pan, mark by scratching where each cupful comes to. By emptying the urine into this for each twenty-four hours it is easy to tell about how many pints and ounces are passed. If less than three pints are passed in twenty-four hours the patient should drink more fluids. If the amount does not then increase this should be reported to the doctor.

Convenient times to offer the bedpan for urination are the first thing on waking, just before serving the noon meal, just before the evening meal, and at bedtime.

What to Do When Urination is Difficult. Sometimes a woman finds it difficult or impossible to urinate in a bedpan. This is partly because of nervous reaction, partly because she finds it difficult to relax in the unaccustomed position.

The nurse should protect the bed with a clean oilcloth square or rubber sheet and convince the mother that she cannot possibly soil the bed. (Lack of confidence in the size of the bedpan is usually one factor in the case.) She should then urge the mother to completely relax and permit the urine to flow.

If this fails she may divert the woman's attention by conversation, and at the same time pour water slowly from one vessel into another, letting it trickle as loudly as possible. The sound of running water often arouses a desire to urinate.

If these measures fail, and the woman has not urinated within twelve hours after the end of labor, the nurse should report the matter to the doctor and get advice.

After all danger of hemorrhage has passed, a hot, wet compress may be applied over the bladder. At the same time pour a little boiling water in the bedpan. The heat from the steam and compress will usually relax the sphincter muscles. This should not be tried until the doctor has pronounced it safe to use heat.

Care of the Genitals. The labia should be kept sterile at all times, as infectious matter may find its way into the womb (which is much like a raw wound after the separation of the afterbirth), and cause child-bed fever. The nurse should scrub her hands with soap, hot water and brush before waiting on the mother.

Every time the parts are uncovered for urination or bowel movement, all dressings should be dropped on an open newspaper. Before putting on clean dressings the parts should be cleansed with sterile pledgets of gauze or cotton or bits of clean, sterile rags dipped in freshly boiled water or an antiseptic solution. Each pledget should be thrown on the newspaper as used, and never dipped in the solution a second time. The anus (the opening of the bowel) should first be cleansed, then the labia. The hospital method is to cleanse the anus, then rinse the other parts by pouring the solution from a sterile pitcher. When stitches have been taken this method should always be used.

After the parts have been made perfectly clean, a fresh, sterile pad should be applied. The newspaper with the soiled dressings should be burned at once.

The nurse should never be too modest to take scrupulous care of these important parts. This should be expected by both mother and nurse. Both the comfort and the safety of the mother are involved.

Color and Amount of Discharge (Lochia). This is bright red for two or three days, then gradually changes to a brown, then to a yellow, and becomes lighter in color until it entirely ceases, which is usually in about four weeks. There is a characteristic "meaty" odor at first, but it should not be offensive or puslike.

If there is anything unusual or that the nurse does not understand in the appearance or odor of the lochia, she should wrap the pad in a newspaper and save it for the doctor's inspection.

The Mother's Bath and Bed. The mother should have a sponge bath every day and have either a fresh gown daily or at least two gowns, one for night and one for day. The bed linen should be changed often enough to keep it neat and fresh, and the bed should be neat at all times. The hair should be combed daily and braided in two braids. It rests both body and mind of the mother to have her bed and person neat and clean and her room attractive and pleasant.

Abdominal Binder. There is a difference of opinion as to the use of the abdominal binder. Some physicians think it tends to cause rather than prevent displacements of the womb, because it tends to press the womb backward as the woman lies on her back. Some physicians object to the use of the binder while in bed, but permit its use when a woman first gets up, in order that the relaxed muscles may have some support while recovering their tone and shape. The best plan is for every woman to consult her physician in regard to this and follow his advice.

The Milk Supply.

Scanty Milk Supply. The milk supply may be insufficient in quantity or of a poor quality for any of the following reasons:

1. The lying-in mother does not get proper rest, sleep or food, so that her body can manufacture good milk. Sometimes nature protects the baby, and the tired, undernourished mother will make good milk but run down and lose weight and strength herself. Sometimes nature protects the mother and takes the shortage out of the baby's milk supply. Either situation is a tragic mistake.

2. Sometimes the opposite situation occurs, and the mother stuffs herself in an excess of zeal and in a conscientious endeavor to carry out everybody's suggestions as to what she should eat and drink. She naturally gets an indigestion, during which she cannot eat. Usually the baby has also been overfed and he gets an indigestion. The rest of both mother and babe is broken. Everything is upset. The flow of milk slackens; the baby is fretful and loses

weight. The neighborhood council decides that, "We have tried everything and still the milk does not agree with the baby; and anyway, there is not enough of it. We will have to put him on the bottle." Then follows a sequence of blundering experiments during which a perfectly good baby is frequently ruined in health and disposition; ditto the mother.

The young mother often makes too hard work of caring for herself and her babe. She only needs to practice the simple general laws of health, including regularity, a balance in sleep, exercise and food, keep serene, and turn a deaf ear to neighborhood council!

How to Improve the Milk Supply. 1. Carefully regulate the food, sleep and exercise of the mother so her body will become able to manufacture a normal milk supply. She should take three to four glasses of milk daily in some form or another, and for the rest eat a generous, well-balanced ration, *but it will not help to overeat.* She should drink at least four to eight glasses of water, depending upon the amount of other fluids taken and whether or not the weather is hot. She should get all the sleep she can take; the more the better. This is very important. She should spend as much time as possible in the open air, and should live in fresh, cool, well-ventilated rooms.

2. The new mother must not worry or get too tired. All farmers know that a fresh milk cow must not be scared or agitated or be driven fast or her flow of milk will be seriously damaged. Not all families realize that the same rule holds good with a human milk supply.

3. If the milk supply is at all scanty it can be increased by milking the breasts dry after each nursing. A very good way is to put the baby to each breast at each feeding, as the sucking stimulates the flow. When the baby has finished a breast pump should be applied, or, better, have the milk massaged from the breasts, until both are completely emptied. This again is a common-sense procedure learned from dairymen, who are very careful that all cows shall be stripped clean to keep the flow of milk up to a maximum amount.

How to Check the Milk Supply. If the baby does not take all the milk and the breasts become painfully full, or if the baby dies, or for any reason it is desirable to check or stop the flow, a binder should be snugly applied and the milk should be drawn or expressed from the breasts just often enough to prevent them from "caking" or becoming sore, and just enough at a time to give relief. Often it will not be necessary to touch the breasts.

To Express Milk from the Breast. Scrub the hands thoroughly with hot water, soap and brush. Wash the breast with boric-acid solution or boiled water. Dry both hands and breast thoroughly. The hands should then be powdered with talcum powder. Sit facing the mother, who may either lie or sit as she prefers. Place the hands about the breast with the thumbs passing each other below the nipple. Do not touch the nipple at any time. Now roll the breast with a flexible, gentle pressure, working from the base to the apex of the breast. Do not hurry and do not pinch or squeeze. Use the greatest gentleness and patience. If it is desired to save the milk for the baby a second person or the mother must assist by holding a sterile cup under the nipple to catch the milk. This can be fed to the baby with a medicine dropper or from a nursing bottle. If the milk is not to be saved it may be caught in a clean towel or cloth.

Drawing Milk from the Breast. A large-mouthed bottle may be boiled and cooled until it can barely be borne on the breast. Apply the mouth snugly around the nipple. As it cools it will act as a vacuum and draw milk from the breast. A breast pump may be used, in which case it should be carefully washed and sterilized before each using.

Stripping the Milk. Some specialists prefer to have the milk stripped from the nipple with the thumb and fore finger, not touching the breast at all. This is just opposite to the method of expression.

Wet Compress. To apply a hot compress, pour boiling water into a clean hand basin and spread a clean hand towel over this to make a hammock. Fold a small bath towel the right size to cover the breast; lay this in the middle of the "hammock." Now gather up the dry ends of the hand towel as close to the compress as possible; twist in opposite directions until the compress is dry enough to handle. Take the compress by the corners and ease it over the breast carefully to avoid burning; cover with a dry towel. Renew as soon as it begins to cool.

Cold Compress. A cold compress is wrung out of very cold water and renewed as soon as it gets warm.

Caked, Swollen or Infected Breasts. This should always be reported to the doctor. He may think the condition requires one or more of the above procedures, or he may think it should be treated with medicated applications. It depends upon the condition as to what treatment is best, and the use of wrong methods may be serious.

Applying a Binder to the Breast. A straight piece of muslin or a long roller towel or one of the abdominal binders may be used. Apply while the breasts are empty or nearly so. Bring smoothly around body; pin down center front with small safety pins placed closely together. Then begin at lower edge and pin a dart on each side to shape it exactly to the form of the breasts. Straps may be pinned to the back and front, passing over the shoulders, if the binder tends to wrinkle or work down. It should be comfortably snug when the breasts are empty.

General Care of the Breasts. The nipple and breast should be kept dry and clean and covered with a clean, sterile cloth at all times. Common clothing, dust, hands, etc., always contain pus germs. It is very easy for these to set up activity in the small cracks in the tender nipple. As much care should be taken with the breasts during the lying-in period as with any surgical wound.

When the Mother First Gets up.

The nurse should stay for a few days after the mother gets up and help the mother take over her load, especially if it is the first baby. The mother should bathe and dress the baby several times under the nurse's directions. She should undertake some new tasks each day, according to her returning strength. It is a serious mistake to permit the whole load to fall at once on the weak, worried new mother. This is apt to upset the milk secretion, and the poor mother has a fretful, crying baby which keeps her awake, and this still further impairs the flow of milk.

Many times ill health and doctor's bills are the price paid with interest for the ill-advised effort to economize by letting all help go as soon as the mother can get on her feet.

The family's schedule and the baby's schedule should be carefully worked out by mother and nurse before the nurse leaves. The family meals and the busy periods of the day should be set down on paper, and the baby's meals, bath time, etc., spaced so the two will not interfere with each other. *This work schedule should be tacked up on the wall and the mother should start in to be as regular with the baby's program as she is with the family meals. Right here is the first secret of having a good baby.*

Part II.

CHILD CARE.

CHAPTER X.

AFTER CARE OF THE BABY.

As has been said, the baby is not finished when born, and for some time after birth he needs much the same conditions, in somewhat different form, that he enjoyed in his mother's body, viz., warmth, oxygen, food and quiet. Warmth he must get from light, woolen wraps, which should never be tightly wrapped about him. Loosely woven woolen is best, as he needs air, and fresh air, all about him. The oxygen he formerly received from his mother's blood he must now get from fresh, clean air. His food he must still get from his mother's body, but in a form especially adapted to his new states. *For the rest he wishes only to be let alone.*

Breast Feeding.

With very, very few exceptions, every mother *can* nurse her baby. With almost no exceptions, every mother *should* nurse her baby.

The few instances in which the mother is so diseased or out of health that she cannot or should not nurse her baby are so rare they may almost be ruled out of consideration. Artificial feeding should certainly never be resorted to without explicit orders from a doctor.

Reasons Why Every Mother Should Nurse Her Child. 1. The sucking at the breast stimulates the womb to contract. This is very important to prevent hemorrhage, to make sure that the womb returns rapidly to normal size, and that it drains effectively and thoroughly.

2. The mother who nurses her baby will be less likely to have female trouble and premature return of menstruation.

3. Furthermore, nursing a child is one of the richest spiritual experiences which come to any woman, and no normal woman could wish to miss it.

Reasons Why Every Baby Should Be Breast Fed. 1. Mother's milk is the one and only food prepared by nature for the exact and particular needs of the human body. No perfect substitute has yet been devised.

2. Mother's milk is always sweet and clean and cannot become contaminated by any of the dozens of ways in which artificial food may become unsafe.

3. It is always the right temperature.

4. It belongs to the baby. *It is his food, prepared at this time for his special personal use.* No mother who realizes what she is doing will take the one, rich, right and suitable food out of her baby's mouth and substitute a poor and often a dangerous imitation.

5. Three times as many bottle-fed babies die in proportion as do breast-fed babies.

The advice of no one should be taken except that of the attending physician, or, in his absence, a public-health nurse.

Feeding During the First Three Days. The baby's stomach and bowels are not ready for milk for several days after it is born. The mother's breast contains a fluid (colostrum) which is just what the baby needs to clean out his digestive tract and make it ready to digest milk. *It is a very serious mistake* *to give the baby anything except a little boiled water before the milk starts to come. Nature has made no mistake in delaying this for two or three days. Nurses, aunts and grandmothers who give the baby sweetened water, catnip tea, milk, pap, and this, that and the other mess and mixture, make serious and often fatal mistakes in so doing.*

Until the milk flow starts, the baby should be put to the breast about every four to six hours during the day. If mother and baby rest well it need not nurse at all at night; surely not more than once.

Nursing Problems.

Causes for Delayed or Insufficient Milk Supply.

1. Severe labor and delayed convalescence.
2. Worry, loss of sleep, nervous excitement.
3. Too hard work before confinement.
4. Getting up too soon and too hard work after confinement.
5. Insufficient or improper diet.

Rest, quiet, sleep and careful feeding will overcome the effect of all these causes in practically all cases.

Other Causes for Failure to Nurse Child.

1. Sore breasts.
2. Inverted nipples.
3. Baby refuses to nurse.
4. Milk disagrees with baby.

The first and second causes may be prevented, in part at least, by proper treatment of the nipples before confinement and at the beginning of nursing. The prenatal care of the nipples is described in chapter VII.

If the nipples do become excessively tender and the baby sucks vigorously it may become necessary for a short time to draw the milk with a breast pump and give it to the baby in a bottle or with a medicine dropper. During the first three days the time of each nursing should be limited to a few minutes. Do not let the baby draw on an empty breast.

A nipple shield is sometimes successfully used when the nipple becomes sore. This is a mask made of rubber, lead or glass which fits over the nipple and protects it somewhat from the terrific squeezing of the baby's sucking muscles, which, any mother will agree, are the strongest muscles in its body.

If the baby *refuses to nurse,* this is usually the fault of the attendant. The baby will practically always nurse if put to the breast promptly and regularly. The nursing instinct is very strong at birth, but fades if not used. If a baby has not been put to the breast within six to twelve hours after birth it is sometimes very hard to teach him to nurse. Squeezing a few drops of milk from the nipple will sometimes bait him to grasp it. Giving the baby sweetened stuff before placing him at the breast is often to blame for his refusal.

Very rarely a baby is born tongue-tied and *cannot nurse.* If there is any suspicion that he cannot nurse rather than that he will not, he should be examined by a physician.

As for the *fourth* reason for failure to nurse the baby, it is very, very seldom that a mother's milk disagrees with a baby for any more than very temporary reasons, such as indigestion, anger, nervous excitement, etc., on the part of the mother, or, still more rarely, in case of actual illness of the mother. Nature protects the baby in many wonderful ways, and one of these is that the mother's milk remains unchanged through many kinds of severe illness.

Indigestion. To take a baby from the breast and put it on artificial food because it has colic or indigestion, or loses weight, is a very serious mistake. All effort should be directed to building up the mother's health, getting more sleep and rest for her, getting mother and babe out of doors and regulating her diet, with careful attention to regularity and manner of nursing. The mother must help herself by self-control and careful regulation of her life.

It should always be borne in mind that indigestion may be caused by many reasons other than the quality of the mother's milk. The commonest of these are:

1. *Tampering with the baby's stomach by feeding it before the mother's milk comes. It cannot be repeated with too much emphasis that the baby should receive nothing but boiled water and breast milk.*

2. *Irregular feeding or too frequent feeding.* This is the most common cause of indigestion. The stomach of the infant who is nursed every time he wiggles or shows any sign of life, not only never has a chance to rest, but it actually has several batches of food in it at the same time; fresh milk, and milk curds in various stages of digestion. This is a sure recipe for colic and indigestion. Even regular two-hour feeding does not give the average infant time to properly digest and get rid of the previous feeding. In a great many cases lengthening the interval between feedings to three hours or longer will promptly stop the trouble.

3. *Nursing too fast at a free-running breast.* A vigorous baby will often nurse so fast, especially if the mother's milk flows fast, that he will promptly get a big, hard milk curd in his stomach and have a pain as big as his appetite. To avoid this the mother may pull the nipple from his mouth for a few moments several times during the nursing. He had better cry from indignation over this than from real pain later.

Intervals Between Breast Feeding. The doctor should always be asked how often the baby should be fed from the time the milk comes. A weak, delicate baby will need to be fed oftener than a strong one, because it cannot take as much or digest as much at one time.

Where the baby is hearty and strong most physicians recommend feeding not oftener than every three hours, and some advocate four-hour intervals from the start.

No baby should be fed oftener than once during the night, and many do well with no night feeding from the start.

A good three-hour schedule is 6, 9, 12, 3, 6, 9, with one feeding about 2 a. m. for the first six or eight weeks. At eight weeks drop the night feeding and gradually lengthen the interval between feedings until at six months the schedule is 6, 10, 2, 6, 10.

By twelve months this can usually advantageously be changed to a four-meal schedule, or 7, 11, 3, 7.

Length of Time at Breast. A good deal of positive advice has been given to the effect that no baby should be permitted to nurse longer than twenty minutes at a feeding.

As a matter of fact, few things require more common sense and a careful judgment than this, and each baby should be carefully watched and studied. As a rule, if the three- or four-hour period is observed the baby should nurse as long as he wants. If he has not been spoiled he will be the best judge as to when he has had enough. There is so much difference in the rate of flow of the milk, size of nipple openings, and nursing grasp of the child, it is manifestly unjust to say that all babes shall nurse for the same number of minutes. The child should be kept awake and busy and not permitted to sleep or idle at the breast.

Most physicians now favor longer intervals between feedings and longer periods of nursing than was customary a few years ago. But this must be carefully adapted to the individual child. It must always be remembered, whatever the interval, that the baby must be fed regularly and that its stomach must have some rest between each two feedings.

Water. *Do not forget to give the baby water,* especially in hot weather. Always boil and cool the water. Give from sterile bottle at first, but change to cup and spoon as soon as possible. Give water midway between feedings at least twice daily. In hot weather give water between every two feedings. Babies cry because they are thirsty as often as because they are hungry.

How to Nurse the Baby. The busy mother should always lie down to nurse her baby. The baby should be placed so he can breathe easily and not be crowded. The mother should have a pillow against her back, and utterly relax. Twenty minutes' absolute rest every 3 hours will do much for a tired mother. If the mother sits she should use a low, comfortable chair. A pillow on the lap enables a woman to sit up straight while holding a baby at the breast.

How to Tell How Much Milk the Baby is Getting. Weigh the baby just before and just after each nursing for one full day. Use a scale which weighs accurately in ounces and fractions of an ounce. Put down each amount and add together. An ounce of milk by measure weighs about an ounce. The total amount should be approximately the same as that allowed for artificial feeding, on page 73.

The Bath.

The baby should be bathed at a regular time daily. Just before the second feeding is usually the best time. Begin giving him a daily tub bath as soon as the navel is healed.

A foot tub or infant's bathtub is very convenient. A wash bowl will answer in the absence of the tub. A low table is more convenient than the lap, although some mothers prefer to handle the baby on the lap. If the table is used, pad one end of it with a heavy bath towel or folded quilt or other soft pad. Place over this the soft towel with which the baby is to be wiped. Place the tub on the other end of the table. If the mother finds it more convenient to handle the baby on her lap she should wear a bath apron or spread a large bath towel over her lap.

On a chair or stool near by place the toilet tray or basket, containing soap, boric acid for the eyes, vaseline for the nose, the glass of sterile cotton swabs on toothpicks, talcum powder, etc.

On the drying rack, also near by, hang the baby's wash rag and clean clothes.

Undress the baby, wash head and face, using soap very sparingly; wipe carefully, paying especial attention to all wrinkles and crevices.

Now lather the baby's body. Take the baby on the left arm, letting the buttocks rest in the palm and the back and head rest on the forearm, and lower gently into the water. With the right hand and wash rag wash off the lather; place the baby on the soft wiping towel, wrap this around him, pat him dry, then take plenty of time to go over his body, gently drying every fold and wrinkle. This will do more than any other one thing to prevent chafing.

Try also to take time to gently massage the baby's body by gently rolling the flesh with the palm of the hand. If properly done the baby will thoroughly enjoy it, and this hardens the skin, stimulates the circulation and tends to make the baby much more resistant to "taking cold."

Powder need be used sparingly if at all, except in sweating weather. A very little good powder may be used, but no more than can be "rubbed in." Never leave loose powder in wrinkles; this is very irritating.

Care of the Scalp.

If the baby should get scale or dandruff on the scalp, rub gently but thoroughly with vaseline at night, and wash off with soft water and good soap when giving the bath the next day. Repeat as often as necessary. Use only a soft brush and infant's comb in arranging an infant's hair. Never try to comb off scale or dandruff.

Putting on the Clothing.

To dress the baby, adjust the diaper, shirt and stockings. Pin these together so that they will be smooth but not tight, and also so they will stay in place, not wrinkle and draw.

Place the skirt inside of the dress, run the left hand through from the bottom to the neck; lift the baby in the crook of the right arm and slip his body into the dress, grasping his feet with the left hand. Never put garments on over a baby's head, and never force sleeves on by bending the arms backward.

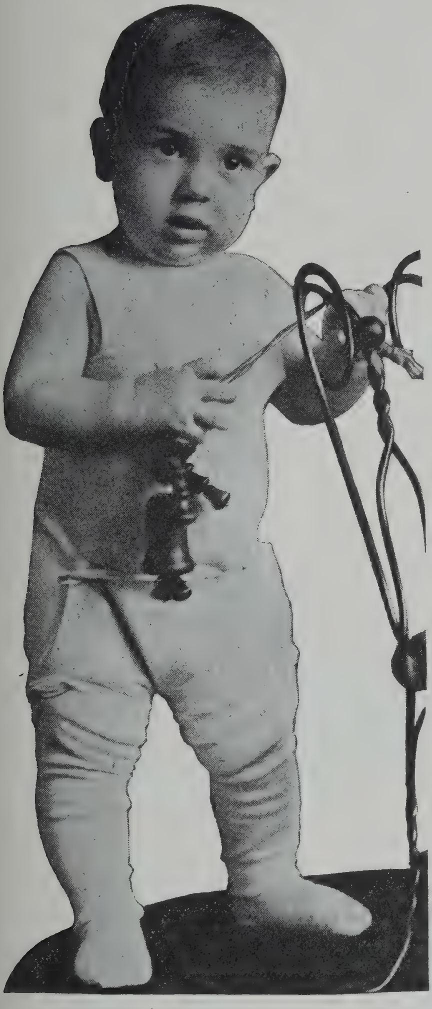
Care of Eyes, Nose and Ears.

Cleanse the baby's eyes with pledgets of cotton or sterile gauze wet in boric acid or boiled water. Use a separate piece for each eye and throw it away. Wipe from the inner corner toward the outer corner, without forcing the eye to open.

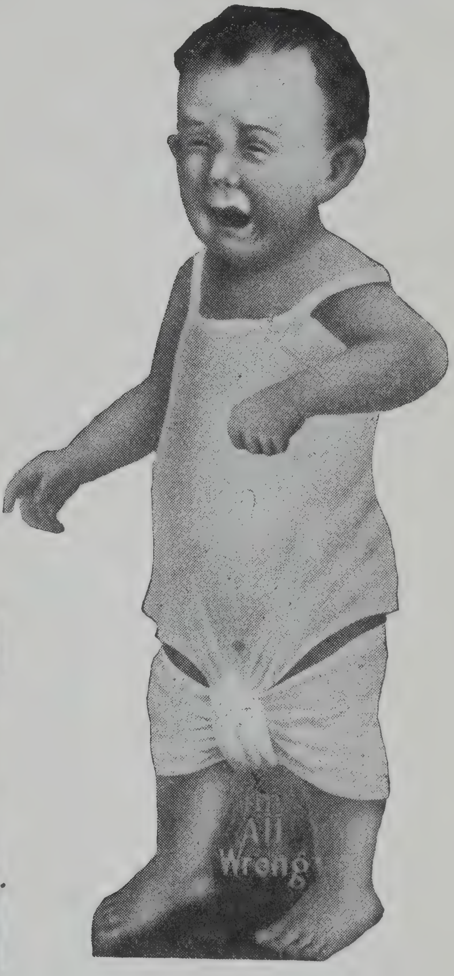
Do nothing to the baby's nose unless there is some discharge or inflammation. Then cleanse very gently with cotton swabs on toothpicks dipped in sterile vaseline. Never use any force and never put any preparation in an infant's nose, other than plain sterile oil or vaseline, without a doctor's orders. Infants sometimes show dangerous results from nasal preparations containing menthol, eucalyptus and other drugs which are used with benefit by adults and older children.

Cleanse the external ear very carefully with a cotton toothpick swab dipped in clean water; dry with a dry bit of cotton. Never attempt to cleanse the inside of the ear canal.

Consult a doctor immediately if the baby shows any sign of trouble with eyes or ears. It is better to do this many times for simple troubles than to



Baby with diaper, knitted band and stockings properly adjusted.



Baby with improperly adjusted clothes.

neglect a serious condition once. Remember what a terrible thing it is to go through life with defective sight or hearing.

Also consult a doctor, a specialist if possible, if the baby does not breathe freely and easily through its nose. This may mean enlarged adenoids, even in very early infancy.

The Baby's Bed.

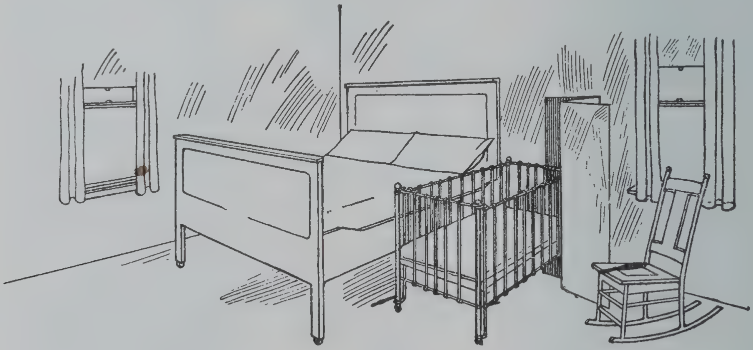
The baby should sleep alone from the very start. It is both dangerous and insanitary for a baby to sleep with an adult. In cold weather the cover is too heavy; the heat from the mother's body is likely to make it sweat. When she turns in her sleep she will most certainly let a draft of cold air in on the baby, and there is always danger that she may lie on it. Every year death certificates are turned in for this cause.

The air under the cover is unfit to breathe, and too often the baby nurses often and irregularly if he sleeps with his mother.

It is much better to place the baby in a common clothes basket on a chair by the side of the mother's bed, or in a box or crib bed.

To Protect the Baby on Cold Nights. Sew half of an old woolen blanket to make a square bag, cut a round hole in the center of one end for the neck; cut down the middle of the front and bind the edge; tie with strings or pin with safety pins. Make very large, so the baby can move his arms and legs and turn as he likes.

After making his night toilet tie him in this sleeping bag. If the room becomes very cold put on a hood *when it begins to get cold, not before.* In extremely cold weather spread a folded blanket over the basket, place the baby, sleeping bag and all, in the middle, fold the blanket over him *loosely* and pin at the corners with safety pins. *Never "tuck in" a child of any age so tightly that he cannot turn or move freely. Children will not kick the covers off if they are free and comfortable.*



Proper arrangement of mother's and baby's beds.

The Nursery.

The baby should have his own room from the start, if possible. Houses should be built and furnished for children quite as much as for adults, and every family, when building, should include a nursery or children's room.

If the house is small and a special room is out of the question, the baby should live in the airiest, sunniest room in the house. Babies wilt, like flowers, in hot, stuffy, overcrowded rooms.

Always put the baby in another room when sweeping, washing or doing anything which will make the air dusty, hot or steaming.

Changing Diapers at Night.

During the first few weeks of life, or during illness, there should be a warm place to take the baby to change it, although it need not sleep in a warm room. After the feeding is regulated an infant's bowels should not move at night. During cold weather it is better to place extra diapers *under* the baby to absorb the urine, and not expose it to remove wet diapers during the night.

A child who awakens when wet and demands a change from the start is less likely to become a bed wetter. He may be more trouble at first, but he will be less trouble later.

Sleeping Habits.

The new baby sleeps almost all the time. It should be wakened regularly every three hours to nurse. In a short time this will become a habit. If this is not done he will not get food enough during the daytime and will have to nurse at night. It is very important that the mother should have unbroken sleep, so great pains should be taken by the nurse, before she leaves, to have the baby trained to feed regularly during the day and sleep at night.

As soon as possible, according to the weather and conditions, the baby should be put out of doors for his daytime naps. He should be dressed exactly as if he were to be taken downtown or elsewhere. Instead of this the buggy is permitted to stand outside while he sleeps. Always shade the eyes and shield from wind and dust.

The Baby is Not a Plaything.

The interest of family and friends naturally centers in the wonderful new baby. Everyone "wants to hold him." After he begins to take notice, everyone "loves to make him laugh," and nine out of ten persons will thoughtlessly tickle or shake or otherwise excite a baby for the pleasure of hearing its violent laughter. *This is all wrong and must not be permitted.*

Babies need to have the position changed often, and they may be occasionally carried from place to place for change of scene and position. As they grow older they should be quietly amused and provided with an abundance of occupation. *Violent play or tossing or shaking should never be permitted.* Lifelong suffering from nervousness may result.

Thumb Sucking.

This habit is more easily prevented than broken. Pin the sleeve down with a safety pin so the baby is comfortable, but so he cannot reach his mouth, every time he tries to suck his thumb or fingers. Do this the very first time he is caught sucking thumb or fist.

After the habit has become fixed the mother must be very persistent and never give up after she has undertaken to break it. If the child is too large for the sleeve pinning to answer, wrap the active hand in a bandage so he cannot get hold of the thumb or any one finger. If this is still insufficient, slip a pasteboard roll over the elbow and pin to the dress so he cannot bend the elbow.

The Baby's Bowels.

The first movements are dark colored and of a smooth, glairy consistency This is called the meconium. This is the material which accumulates in the bowel before the baby is born. The colostrum in the mother's breasts during the first two days cleans this out of the bowel. Until this is done it is wrong and foolish to put anything in the baby's stomach which must be digested.

The bowel movements soon turn yellow after milk feeding starts, and should have a smooth, mushy consistency. The normal baby usually has from two to four movements in twenty-four hours. A baby which is fed regularly, sleeps regularly and is bathed regularly soon comes to have regular bowel movements. Nothing is more important than that regularity should early be established in this respect.

From three months on a mother may begin training the infant in this respect. A porcelain cuspidor (spittoon) of the usual shape is an ideal vessel for this purpose. The mother warms this, holds it on her lap and seats the baby on it in such a way that the baby is comfortably supported in the crook of her arm. By doing this regularly ten or fifteen minutes after the early morning feeding and again after the evening feeding, twelve hours later, it will usually become possible to almost wholly eliminate soiled diapers. By careful watching and making a schedule of the normal urinations it will early become possible to reduce the number of wet diapers. A child who is thus trained to be dry and clean and regular will be far less liable to become a habitual bed wetter, and will be a more comfortable, sanitary and satisfactory child during his waking hours.

Signs of Bowel Trouble. Undigested milk curds, mucous clots or shreds, or greenish or watery stools, or too frequent stools, indicate indigestion. The treatment is to immediately stop giving milk if the condition is acute, or reduce the amount if the symptoms are not severe. Give one to two teaspoonfuls of castor oil, if an infant, or a tablespoonful if the child is a year or older. Give all the cool, boiled water the child will take. If the discharges are irritating give an injection of one pint of warm, boiled water in which one level teaspoonful of salt has been dissolved. Give this very slowly and gently. After each movement of the bowels wash the buttocks with soap and water, pat dry with a soft cloth, then grease thoroughly with vaseline, lanoline, cold cream or clean mutton tallow.

Constipation.

Diet for Constipation. When a breast-fed baby becomes constipated the mother should carefully regulate her own diet by eating an abundance of laxative food and drinking plenty of water. The baby should be given boiled water thirty minutes or so before each feeding.

From three months on, the baby may be given daily one or more teastoonfuls of juice from a carefully selected sweet, ripe orange, or unsweetened prune juice, or carefully selected ripe tomato juice. Dilute with water and give from a spoon one-half to one hour before one feeding.

From seven or eight months on, a constipated baby may be given an ounce of oatmeal gruel before one feeding each day. The amount of fruit juice should be increased to one tablespoon full or more.

Immediate Relief of Constipation. *Never put a child of any age to sleep whose bowels have not moved during the previous twenty-four hours.*

For the small infant the oil enema is the best first aid. A soft rubber ear syringe or infant syringe may be used, or, better still, a soft rubber catheter the size of a small lead pencil, with a small funnel fitted into the open end.

Pour four to eight ounces (according to the size and age of the child) of olive oil, sweet oil or good cottonseed oil into a cup and set the cup in hot water until the oil is warm. Place the infant on its left side with its knees drawn up on its abdomen. Draw the syringe full of the warm oil and very gently and slowly inject it into the bowel. Hold the diaper over the opening for a moment or two and keep the baby quiet until the bowels move.

If the catheter is used it should be oiled and gently inserted with a twisting, corkscrew movement, so the end of the tube cannot remain caught in a pocket of the loose, wrinkled mucous lining of the bowel. The tube may be inserted for four to six inches. *Never use any force whatever in inserting anything in a baby's bowel.* After the tube is in place pour the oil very slowly through the funnel. Withdraw the tube slowly and hold something over the anus or bowel opening as directed above. Soapsuds made of warm, soft water and Castile or Ivory soap, or warm water with a pinch of salt may be used.

Cautions: Never give a baby anything more than a dose of castor oil without a doctor's orders. Do not give more than one, or at most two doses in succession, as repeated doses of castor oil cause constipation instead of relieving it.

Try every suggestion given in this book and make an earnest study of trying to regulate the baby's bowels without giving laxative medicines. It is one of the most unfortunate things which can happen to have the regular rhythm of a baby's bowels chronically upset, thus establishing an early "cathartic habit."

The muscles of the bowel contract when the stomach begins to churn its food. This is why a few moments after eating is the natural time for the bowels to move. The muscles soon become trained to act at a certain time with clocklike regularity. Try to establish this habit, and never let anything interfere with the regularity of the baby's feeding, and do not give up until the bowels have become perfectly regular also. *Do not use suppositories or "soap sticks" or irritate the rectum in any way. Serious results may follow.*

Colic.

A baby may have colic from too hard a curd of milk in the stomach or from too much gas in the stomach or bowels.

If the stomach is at fault a tablespoonful of warm water to which is added one drop of peppermint water (not essence or oil of peppermint, which are much too strong for an infant).

A hot cloth over the stomach and bowels, with a hot-water bag to the feet, will help.

If there is gas in the bowels, or if the bowels have not moved freely at the usual time, a warm injection should be given as described on page 56.

To Prevent Colic. Making the baby take his milk more slowly, and putting him on the back to help him belch up swallowed air will tend to prevent explosions of colic.

Lengthening the intervals between feedings, so the stomach is empty and rested each time the baby nurses, will often clear up the trouble.

The early establishment of regular movements of the bowels will do much to prevent bowel colic.

Diapers.

It will minimize the unpleasantness of caring for the baby's diapers if a square of soft old linen or a very soft paper napkin (sold in most 10-cent stores at 50 for 5 cents) is placed inside of the diaper to receive the bowel movement. This can then be burned, and the diaper itself is much more easily washed. This is especially desirable during the first week, as the first bowel movements are dark and stain the diaper.

Washing Diapers. A slop jar with a tight cover should be used to receive the soiled diapers, and they should be covered with water, after all lose bowel movement has been removed with newspaper and burned. They will wash more easily if not allowed to dry. They should be sudsed, boiled, dried and ironed in the regular manner. *Wet diapers should always be scalded and dried before using again.*

Diapers should always be dried in the sun if possible, and should be ironed unless the material is very soft.

Never use lye, strong soap, bleaching powder, or anything else on the diaper except Castile or Ivory or other mild soap and hot water. They should always be thoroughly rinsed.

The diaper should be folded square and put on so it gives perfect freedom.

Crying.

A healthy, happy, comfortable baby does not cry. When a baby cries he has something to cry about, and it is the mother's business to find out the reason. The theory that a baby needs to do a certain amount of crying in order to thrive is dangerous and may easily lead a young mother to seriously neglect her baby. Babies may cry for the following reasons:

1. *Because they are tired.* People say that babies soon learn to cry to be taken up, and that they should be disciplined and left to "cry it out" until they drop asleep with exhaustion. If mothers would remember that a baby needs to have its position changed often and its clothing straightened in order that its tender muscles and skin may not actually suffer, there would be much less crying and so-called "temper" in babies. Frequently they get tired because they are tucked in too tightly or pinned up so they can not move.

2. *Because bands become tight and clothing rubs or chafes or pins prick.* Every effort should be made to prevent the baby's clothing from annoying or fretting him, and it should be loose enough to permit him to move freely.

3. *Because his sleep has been disturbed.* A baby's regular sleep should never be disturbed; he will be fretful, tired and justly cross.

4. *Because of distress in stomach and bowels.* This is caused by too frequent feeding or improper feeding.

5. *Because he is hungry.* A perfectly good reason, but the mother should be quite sure this is the real reason.

6. *Because he is sick.* The baby who is uncomfortable begins by fretting and increases his plaint until he yells lustily and indignantly. The baby who is tired and needs sleep has a weary look and a whimpering, irritable cry. The baby who is hungry sucks his fist, reaches about with his mouth and begins with a talkative, argumentative note, which increases to a furious remonstrance when food is delayed. The baby with colic or acute indigestion doubles up, shrieks violently, shows paroxysms of pain and real tears. The sick baby appears heavy-eyed and listless and whimpers rather than cries. A low, plaintive wail marks the very sick child. A child in acute pain, such as earache, cries out suddenly, is apt to turn the head back and forth, and an older infant will grasp at the painful region.

A baby does not need to "cry for exercise." He had better crow and kick and laugh. The mother should strive to understand what her baby is telling her, because he "has no language but a cry."

CHAPTER XI.

WEANING.

When to Wean.

Under normal conditions weaning should be a gradual process, beginning at about eight or nine months and ending by twelve months.

If properly conducted the milk flow will gradually lessen, the baby will gradually become accustomed to other food, and the only one to experience any grief will be the mother, who will regret that the supreme experience of nursing her baby is to be no longer hers.

If the baby should be nine months old in July or August, he should be given fruit juice, cereal gruel and a little modified cow's milk in addition to his mother's milk, but it will be safer to not begin to withdraw the mother's milk until September, or even October, if the weather remains very hot.

If the mother becomes pregnant, weaning must be begun at once and pushed rather rapidly. No woman can properly nourish two successive children at once. If the mother becomes ill the doctor must decide if weaning is advisable. Fortunately, it is seldom necessary in ordinary illnesses.

The return of menstruation does not usually injure the milk supply. A nursing mother who menstruates should, however, be especially careful to not overwork or get too tired, especially at her periods. When menstruation returns while nursing a baby, the mother should go to bed for one or two days just before the next expected menstruation. Sometimes this will prevent its return.

How to Wean.

When it is determined to begin to wean the baby, begin by giving cow's milk modified by the formula for four to five months (see chapter XIV, on Artificial Feeding) in the place of the second or third daily nursing.

Give this from a small cup. Try very hard to teach the child to drink the milk rather than take it from a bottle. This is very much better than to have to continually sterilize nipples and bottles; it is better for the teeth, and it also does away with the very troublesome process of "breaking from the bottle" later. This is often much more difficult than weaning from the breast.

If this milk agrees with the baby after one week's daily use, gradually increase the strength to the formula for nine to ten months.

When the baby is ten months old substitute modified cow's milk for another feeding.

When eleven months old replace a third nursing, now using whole milk. When twelve months old replace the fourth and last nursing. Most mothers prefer to keep the evening nursing until the last.

When to Give Food Other Than Milk.

1. Crusts, educator crackers (very hard whole-wheat crackers made expressly for this purpose) or zwieback should be given once daily from six to eight months, twice daily from eight to ten months, three times daily from ten to twelve months, and with every feeding from one year on. After one year bread and butter may be given once or twice daily.

2. Fruit juice should be given daily from six months and may be begun as early as three months. From nine months on a little soft pulp of prunes, baked apple or ripe pear may be given.

3. From seven months on the baby may be given a tablespoonful of cereal gruel (see page 63) before regular feeding.

4. From eight months on the baby may be given one tablespoonful of vegetable soup (see page 64) before one feeding each day.

CHAPTER XII.

FEEDING AFTER WEANING.

The Daily Schedule from 12 to 18 Months.

Every mother should make a daily schedule for the baby, change it as the baby grows older, and follow it strictly.

The daily schedule for the child at one year should read as follows, changing the hours to correspond to the rising hour, which will vary in different families.

1.—When the baby first wakes up give him a drink of water; place him on a vessel to urinate; then give him two or three tablespoonfuls of fruit juice (orange juice, prune juice, tomato juice, pineapple juice, thin apple sauce, or raisin juice). Kick and play until breakfast.

2.—7:00 a. m. Breakfast: Piece dry toast, zwieback or educator cracker (he may have this to chew on while the mother is preparing the rest of the breakfast); tablespoonful cereal mush; glassful whole milk.

3.—7:30. Bowels move.

4.—8:00. Bath.

5.—8:30-10:00. In play pen, out of doors if possible.

6.—10:00. Drink of water; urinate; short walk, with mother's help; back in play pen.

7.—11:00. Dinner: Dry toast, zwieback or educator cracker; vegetable mash. One of the following: jellied egg; or cereal mush; or tablespoonful mealy baked potato with cream or butter and little salt; or junket; or unsweetened custard; or meat broth and crackers; or milk soup and crackers.

8.—11:30 to 3:00 or 3:30. Nap.

9.—3:00. Drink of water; urinate.

10.—3:30. Lunch: Slice bread and butter; glassful of whole milk or buttermilk.

11.—3:30-5:30. Play pen, sand pile or ride in baby buggy.

12.—5:30. Drink of water; urinate; visit with mother.

13.—6:00 to 6:30. Play pen.

14.—6:30 to 7:30. Supper: Bread and butter with apple sauce, or baked apple, or prune pulp, or ripe pear, or pulp of a sweet orange, and glass of whole milk or buttermilk. Or boiled rice with milk, with fruit sauce. Or dry toast with cereal mush and glass of milk or buttermilk, and fruit sauce. Or milk toast with fruit sauce.

15.—7:15. Bowels move.

16.—7:30. Put to bed.

Preparation and Care of Food.

Milk. Unless certified grade A raw milk can be obtained, it is better to measure out enough fresh milk in the morning to last all day, put it on the stove and bring it quickly to a boil (do not let it bubble for longer than 1 minute); cool it quickly and keep it on ice or in a cellar, iceless ice box or suspended in the well. *It must be kept cool from the moment of milking.*

Pour out just what is needed at each meal and stand the glass in hot water to take off the chill before giving it to the baby.

Never pour used milk back with the stock supply. Throw away any that is left in the baby's cup.

Keep a special cup with a handle for the baby to drink milk from; never use it for anything else; scald it every time it is used and put it where flies cannot touch it.

Carelessness with milk is one of the chief causes of summer diarrhœa; the mother must not make even one slip in this important matter.

Ordinarily the baby should be given plain whole milk. The cream should be thoroughly stirred in before taking out each feeding. Part of the cream should be removed from Jersey milk, however, as it contains too much fat.

Buttermilk made from clean, whole milk with buttermilk tablets (which may be bought at any drug store) is easily digested, and makes a pleasing variety, especially in hot weather. Care should be taken to not let it ferment long enough to make it bitter, as this will turn the baby against it.

Train the child to drink milk slowly. When gulped down it makes large curds in the stomach, which are hard to digest.

Bread. Fresh, soft bread should never be given to any child, especially to a young child. Bread should always be dry enough and well enough baked that it will crumb and not mash when rubbed between the fingers.

Whole-wheat bread contains more vitamines and minerals such as are needed to make good bone and blood than does white-flour bread.

To make zwieback or twice-baked bread. Slice bread and bake the slices in a quick oven until a delicate brown.

Cereals. Whole-grain cereals should be used very freely in feeding growing children. The refined and prepared cereals have had much of the most valuable parts removed.

Children should be given a variety of cereals. Oatmeal may be the standby, but some other cereal should be used at least twice a week in order that the child may not become tired of the sameness of his diet.

It is important to cook the hulls of grains, even though they are afterward strained out, as most of the vitamines and minerals are in or next to the hull. These are dissolved in the water they are cooked in.

To cook cereals. All cold-climate cereals require long cooking to break down the starch granules and develop their flavor. Oatmeal, cracked wheat, hominy, barley, corn meal and Graham meal should all be cooked for a number of hours. Rice, on the other hand, may be thoroughly cooked in thirty minutes.

Cereal gruel. Sprinkle one tablespoonful of either oatmeal, corn meal, barley, cream of wheat, farina, rice flakes or other uncooked cereal in enough boiling water to make about as thick as ordinary flour gravy when done. (The amount of water varies with different grains.) Boil hard for three minutes, then put in double boiler and cook for one hour; add one-fourth teaspoon of salt. Strain through a fine sieve.

Cereal mush. Grits, flakes and uncooked package cereals require less cooking than whole or crushed grain. One hour steady cooking will make most of these palatable and digestible. Oatmeal, corn meal, cracked wheat and whole barley should be cooked at least three hours. An excellent method is to boil the cereal for three or four minutes in the proper amount of water (which varies with different grains), then place in a fireless cooker and leave over night.

Cereal mush should be about as thick as mashed potatoes when done. All cereals with hulls should be rubbed through a sieve before they are given to young children.

Cereal mush may be wet with a small amount of cream or milk, but should be fed to children thick enough to encourage some chewing. If properly salted in the making, the mush will have a good flavor and will not need the addition of either salt or sugar to make the child like it.

Vegetables. Recent discoveries and experiments in food and diet make it known that vegetables are valuable and indispensable in children's diet. It is very important that children should become accustomed to the taste of vegetables and early acquire a liking for them.

Vegetable soup. Take one cup each (chopped fine) of two or more (or all) of the following vegetables: spinach, carrots, celery, tomatoes, string beans, green peas, dandelion greens, young turnips, young turnip tops. Add water to cover; cook slowly for one hour. Add boiling water as fast as it boils away. Strain through fine sieve; add a little salt.

This kind of vegetable extract is often prescribed for delicate and anæmic infants and may be added to the diet of any child. It is especially rich in iron, potash and other minerals, and is also rich in the vitamines necessary to growth.

Vegetable mash. Make as for vegetable soup, but allow water to evaporate and strain pulp through a coarse sieve. Be sure to strain out all fiber and coarse parts.

Fruits. Fruits also are rich in vitamines and minerals and are very important in the diet of children.

Selection of fruit. All fruit given to young children should be perfectly ripe and fresh. Select only ripe, sweet oranges for the juice for infants. Only perfect fruit should be given to any young child.

Canned pineapple juice and tomato juice may be used if good brands are selected in which only choice ripe fruit was originally used.

Prunes and other dried fruit should be carefully selected; only fruit which was choice and ripe when dried should be cooked for small children.

To cook prunes or other dried fruits. Wash thoroughly, cover with water; soak overnight in aluminum or porcelain-lined pan; place on stove *in same water;* simmer very slowly until the water is syrupy and the fruit is very soft.

For a baby under nine months, strain off the juice only. For over nine months rub the pulp also through the sieve.

Never sweeten any dried fruit. Ripe dried fruit, cooked as described, will develop its own rich, sweet syrup.

Eating Habits.

Regularity. Every child, no matter what his age, should eat regularly. In order to be ready to eat at the regular time the baby must sleep at a regular time. Do not let anything interfere with the baby's regular schedule. No matter how busy a mother may be, it takes more time to care for a cross, "fussy" baby than to be punctual and systematic and always have a healthy, happy child.

Eating Alone. From the very beginning of giving solid food, have the baby sit on his own little chair before a little table. He will learn to eat properly and will see only his own food, so will not even be curious about what the rest of the family eat.

The mother can eat her own meal in peace and quiet while the baby plays happily in his play pen or sleeps.

The rest of the family will not be tempted to spoil his liking for simple, wholesome food by giving him "tastes" of things he should not have.

This plan eliminates the dangerous "high chair," which should never be used.

Chewing. The baby should be urged to chew and should be given plenty of time to sip his milk and chew every bite, but he should be kept continuously busy until he has finished his meal. *It is all important that the habit of deliberate, careful chewing be taught from the start. When the baby's teeth come through the gums he wants to chew. This is the psychological moment. Let him never forget for one day how to chew. If this instinct once fades it is very hard to ever train a child to chew his food properly.*

It is a great mistake for a busy mother to feed a child entirely on soft food from a spoon, because it can be done more quickly and easily than to bother with letting him feed himself. This is training in bad habits and is very injurious to his manners, digestion, teeth and health.

Piecing. In no one thing will the mother have harder work than she will in preventing well-meaning but mistaken relatives from giving the baby cookies, candy, pop, ice cream, etc., between meals or when visiting.

No growing child should ever eat sweets of any kind between meals. *Especially should no child during its "second summer" ever have a taste of anything not included in its regular feeding schedule.* It is much better to prevent this habit than to correct it.

The mother had far better risk giving offense than to risk having a sick child.

General Cautions and Suggestions.

Do not forget to give the child plenty of water to drink, and always from his own cup. Keep this cup clean and away from flies, and give him only water which has been boiled and cooled. Children often fret for food when they are really thirsty rather than hungry.

Eating with Clean Hands. From the very first wash the baby's hands before he handles his bread and food. This is important, because babies handle everything and may contaminate this food. It is also important from the standpoint of training in future health habits. Well begun is always more than half done in the matter of child training.

Clean Food. Protect all food from dust and flies. Never pick up food or anything else which the baby has dropped on the floor and let him put it in his mouth again.

While he is struggling with his first crusts, place him in the middle of a clean surface on a bed or on a clean sheet spread on the floor or in his play pen; then some one should watch him that he does not get his food dirty, that he does not choke, and that no flies get on his food.

Flies always bring filth on their feet, and *should never* be permitted to touch the baby's food or any container of milk or food. Flies on food and milk are one of the chief causes of summer diarrhœa, from which so many babies die. Teething has nothing to do with it.

Feeding from 18 Months to Two Years. The variety of food may be considerably increased by the addition of the following to the choice for the 11 o'clock meal: Small sandwich made from thin toast and crisp, dry bacon, or finely mixed white meat of chicken or delicate fish, or scraped raw beef delicately broiled; thickened soups; meat broths; thoroughly cooked cereal mushes; simple desserts, such as cereal puddings, plain custards, stewed dried fruits, and most fresh fruits; also fresh, ripe tomatoes with skins and seeds removed.

Continue the four-meal schedule and separate chair and table.

CHAPTER XIII.

FEEDING FROM TWO TO SIX YEARS.

Proper Seating at Table.

At some time after two years, at different times with different children, the child will be ready to go on three meals per day. Then it will be more convenient to have him eat with the family. He may then have a "youth's chair" or may have a small box placed on an ordinary chair. He should always have some place to rest his feet. Children are often restless and hard to control at the table, simply because they are weary and uncomfortable. A little step may easily be added to any ordinary chair.

The child should still have his own food, and greater watchfulness than ever will be necessary to keep him from getting forbidden articles.

Variety.

If he is fed a *variety* of well-cooked, appetizing food suitable for his age, it will be a long time before he will trouble about what the rest are eating unless the matter is suggested to him or discussed before him.

Between two and six a greater variety of vegetables, cereals and fruits may be given, and once in a long while a small bit of tender, choice meat may be given, and an occasional egg.

He should still drink a full glass of milk three times daily, with some additional milk used in the cooking.

Sweets.

Honey and molasses may be used with moderation. If the child has these occasionally, with plenty of fruit and simple desserts, he will not need other sugar. Sugar should be used *sparingly if at all;* on cereals or fruits, except a little on tart fruits. It is much better to teach the child to like the fine natural flavor of the different cereals, fruits and vegetables than it is to have to "bait" everything with sugar to get him to eat it.

This custom of sweetening everything is one of the worst habits that can be formed, and it is one that is all too common. This is one of the factors in the present universal breakdown of the teeth of American children.

The longer the child can be prevented from getting his first taste of candy the better. It would be better if he never made its acquaintance. Even if given as a dessert at the end of a meal, it should be followed with eating a piece of apple or orange or drinking water to remove the concentrated sugar from the teeth.

Things a Growing Child Should Never Eat.

1. *Any combination of starch and grease.* All starch is partly digested in the mouth while it is being chewed. Nothing more is done to starch until it reaches the bowel. If starch is coated with grease the saliva does nothing to it and the bowel must do it all. This is hard on any one's digestion, but es-

pecially that of a small child. For this reason, flour gravy, pie crust, fried potatoes or any other fried food should never be given to a child.

2. *Anything it cannot, will not or does not chew.* Raw cabbage, corn, cucumbers, radishes, pop corn, nuts, tough meat, etc., are examples of food unsuitable in this respect.

3. *Highly flavored, seasoned or spiced foods.* It is a serious mistake to give young children food flavored with pepper, spices, vinegar, or highly sweetened. This includes sausage, wienies, pickles, relishes, preserves, mustard, etc. This soon destroys the child's liking for simple, wholesome food and starts endless trouble and capricious refusal to eat what he should eat.

4. *Pancakes, biscuit or soft fresh bread of any kind.*

5. *"Treats" between meals,* such as pop corn, peanuts, candy, pop, ice-cream soda, etc., not only do a child no good whatever, but actually do him much harm by spoiling his appetite, overworking his digestive organs, and making him difficult to manage. Above all, a child should never be "bribed" with these things. Ice cream is a wholesome food when used with meals as a food. It should not be given between meals.

Breakfast.

The Importance of Breakfast. Breakfast is the key meal of the day. If the child does not eat enough breakfast he is cross and hungry in an hour or two and fusses until he gets a "piece." Then he is not hungry for his noon meal, and must have another "piece" in the afternoon. This becomes a daily occurrence and will make any child fussy, spoiled and subject to indigestion.

Why Children Do Not Want Breakfast. 1. Too heavy supper the evening before. If the digestive organs have had to work all night they are not yet ready to care for another meal.

2. Eating too soon after rising. A child who is brought from his bed to the table in his night clothes, or scarcely awake, cannot be expected to eat. Every child should have a drink of water on waking, and then be quickly bathed and dressed and given a few moments to play, out of doors if possible, before being served with breakfast.

3. *Unappetising food.* Too often the child who sleeps late is expected to eat cold, scrappy food. No matter how busy the mother is, nothing can possibly be as important as the matter of serving a fresh, well-balanced morning meal to her growing children.

In the long run she will save time by doing this, as a well-fed child will be a happy child and will not disturb her later by teasing for pieces.

Feeding Problems.

The Child Who Will Not Drink Milk. Children may refuse milk for any of the following reasons:

1. Bottle-fed babies who have been fed on condensed milk, or milk modified with too much cane sugar, are apt to refuse plain, unsweetened cow's milk.

2. Children who nurse the bottle or the breast too long often refuse to drink milk from a cup.

3. The mother may have at some time given the child milk which tasted or smelled of onions, cheese, fish or some strong food which had stood near it;

or the milk may have been tainted by the cow's eating wild onions or some strong herb in their spring pasture; or the milk may have at some time begun to turn sour.

4. The child may have been spoiled by having been given sweetened drinks and highly flavored food, which he naturally prefers to the mild-flavored milk.

5. The commonest reason is the failure of the mother to realize the importance of a full milk ration for every growing child. After the child has once been permitted to stop drinking milk it becomes very difficult to retrain him.

6. The child's diet is permitted to become monotonous and unattractive. He craves a change, and the only way he has of expressing this is to refuse the things he has continuously.

The child will drink milk continuously, just as he eats bread at every meal, if he is given a variety of other things.

7. The child is permitted to become capricious and undisciplined. This kind of a child never feels well, is capricious about his food as well as everything else.

The answer to this is a course in child study for the mother, and never punishment for the child!

The Child Who Craves Meat. Any person craves meat who does not eat a sufficient amount of milk or milk products or eggs. Everyone should have some animal food every day. The child who does not get a full milk ration every day craves animal food to take its place.

It would be very dangerous to give the child enough meat, cheese and eggs to give him the same food value as the quart of milk he should get every day.

A quart of milk will give the child as much material for growth and energy as he would get from seven eggs or two pounds of chicken. He needs this much growth material, but no one would think of giving a child this much milk or eggs.

It is practically impossible for any child to make a normal, healthy growth without a reasonable amount of milk. If the child actually drinks a cup of milk at every meal and gets some besides in the cooking, with an egg or cottage cheese occasionally, he will not be apt to get ravenous for meat, and will do better with very little meat. On the other hand, no child should be permitted to live on milk to the exclusion of solid food.

The Child Who Refuses to Eat New Food. This again is more easily prevented than corrected. Unless a child has had an unpleasant experience connected with the tasting of new substances, he will naturally be responsive to the suggestion that "here is something new and good to eat; mother is *sure* baby will like it." Then be sure that the new substance is delicately prepared and appetizing, and offer it when the baby is actually hungry.

When giving new vegetables, especially those having decided flavors, give small bites with crumbs of bread or toast, or mix with potato, in order to allow the child to gradually become accustomed to the new flavor.

Every care should be taken to prevent the child from hearing others discuss any wholesome article of food unfavorably. The mother should try to bring her children up without prejudices for anything not harmful.

The Child With a Poor Appetite. The child who is constipated, who has large adenoids, bad teeth, who gets too little sleep, or who does not get enough outdoor life and fresh air, is likely to be finicky and delicate about his eating.

The child who eats too often or who is stuffed on dainties, or who is harried and nagged by a nervous mother, will not eat well.

A child who does not get hungry when strictly limited to three good, wholesome meals per day should have his sleep schedule lengthened, also his time for fresh-air play. If he still fails to eat as he should he should be examined by a physician and have his defects, if any, corrected.

Going without one or two meals, or eating nothing for one day but oranges and water, or taking nothing for breakfast for a few days but oranges or grapefruit juice and water, may give the digestive organs the necessary rest and stimulation.

Rarely, if ever, should a child be forced to eat when he is not hungry. It is more sensible and more humane to find and correct the cause.

CHAPTER XIV.

ARTIFICIAL FEEDING.

Artificial Feeding a Problem.

When it becomes necessary to feed a baby something in place of its mother's milk, every such baby becomes a problem. What will agree with one may not agree with another. A food may not cause indigestion or actual illness, and yet the baby may not make good bone, muscle and blood out of it. A baby may not appear to be sick and still may not make a normal gain in weight. A baby may lay on soft fat and appear to be oversized and still may not make good muscle or be a strong baby. Every bottle-fed baby must be weighed every week and every bottle-fed baby should be fed under the directions of a physician, who should see the baby often. It is much safer to prevent trouble than cure it.

Cow's Milk the Best Substitute for Mother's Milk. There is no perfect substitute for mother's milk. The best imitation which any one at present knows how to make is made from clean, fresh cow's milk.

Cow's milk contains about the same amount of fat as does average human milk, but it contains less sugar and more and harder milk curd. On this account water must be added to thin the curd. This thins the fat, so some top milk or cream is sometimes added. This is not always necessary. Then, since the human baby needs more milk sugar than a calf, and because the sugar also has been diluted by the water, some kind of sugar must be added to the mixture. These proportions must vary at different ages and in different conditions in order to agree with the child and keep him growing.

A table will be here given such as is now used in feeding normal, average children. Because this may not agree with a child the mother must not assume that it cannot take cow's milk. It may need less fat or sugar or curd, or it may need more of one of these, or less of one and more of an other, to meet its own particular digestive capacity.

For this reason the mother must weigh the baby every week (if it should lose or stop gaining she should weigh it every day). She should watch the bowel movements closely and be able to tell the doctor about them with great exactness, and she should take the baby to the best baby doctor she can reach, regularly once a month, and between times if the baby stops gaining or appears out of health. She should follow the directions of the doctor, or if she cannot possibly reach a doctor, she should follow the advice of the nearest public-health nurse, or write to the Division of Child Hygiene at the State Board of Health, Topeka.

Patent or Proprietary Baby Foods. In the days before supervision and regulation of public milk supplies, and before the general use of ice and especially before people were taught how to properly care for milk, a great many babies did not get along well on cow's milk. This led to the very praiseworthy effort to invent an ideal baby food. All sorts of combinations of cereals, preserved milk, etc., were tried. Many of these are manufactured under ideal sanitary conditions and are safer from a sanitary point of view than much of our cow's milk. *No one of them, however, is a complete food, and most of them must be combined with cow's milk, and add nothing to its value. They are all expensive from the standpoint of money, child development and child health.*

Condensed, Evaporated and Dried Milks. *Condensed milk* may not cause colic or acute indigestion, and many babies grow fat on it for a time. On this account it is used much too often for bottle feeding. Condensed milk is preserved in sugar. It will make a fat, soft baby, but the baby will not make good bone and muscle and will not have proper resistance to disease. Condensed-milk babies are liable to rickets. Condensed milk readily causes certain kinds of bowel trouble, and children fed on condensed milk are especially liable to constipation after weaning. *All authorities on foods and baby feeding strongly advise against feeding condensed milk to babies.*

Evaporated milk is not sweetened, and is a safe, temporary substitute for cow's milk in travel or when good, fresh cow's milk cannot be obtained. It is expensive, spoils quickly, and offers no advantages over fresh cow's milk.

Dried milk promises to solve some of the problems of uncertain milk supply, and is now the best substitute for fresh milk when this cannot possibly be obtained. The best brands contain all of the solid constituents of whole milk practically unchanged, and need only the addition of water to virtually reproduce whole milk.

The Care of Milk. *Milk is the most valuable and indispensable of human foods. It is the one best growth-producing food for children.* Not only children, but many other living things thrive and grow on milk, among these are germs, both good and bad.

Disease germs multiply by millions in warm milk. A few germs from the foot of a fly, a dirty milk pail, or from contaminated water with which the milk utensils may have been washed, will multiply to millions within a few hours if the milk is not kept cold.

Milk, to be safe, must be milked from clean, healthy cows, with hands as clean as the woman's hands should be who cooks or prepares the milk for the baby. It should be cooled as quickly as possible and kept cold until the very moment of preparing it for the baby. *From beginning to end, not a single fly nor a particle of dirt should touch the milk. Cleanliness and cold are the watchwords for safe milk.*

Kind of Milk. Milk from Holstein cows is more like human milk than that from Jerseys or Herefords. Milk which is too rich will not agree with the baby. Jersey or Hereford milk may be used, however, by removing part of the cream. Milk from a healthy herd tends to be more uniform and is ordinarily better than milk from one cow. Of course, all cows should be tuberculin tested and free from all disease.

Utensils and Their Care.

A certain shelf in a fly-proof place should be set apart for the baby's milk things. Everything used about the baby's milk should be kept by itself and used for nothing else whatever.

All utensils should be filled with cold water as soon as emptied. Never let milk dry on anything. As soon as convenient wash in hot water and soap, rinse and boil, drain out of the boiling water without wiping, and place away until used.

Rubber nipples should be rinsed in cold water, scrubbed and boiled, always taking care to turn them wrong side out and clean both sides. Drop into a jelly glass which has been boiled, and put on the cover to the glass, which should also be sterile. Nothing should ever touch the milk which has not been scoured and boiled and kept in a perfectly clean place. Wash and boil the small things in the saucepan. *Do not wash them in the dishpan or with other dishes or utensils. Use only fresh, clean cloths.*

The following utensils will be needed for modifying milk:

A 3- or 4-quart saucepan of aluminum or granite.
A kettle for Pasteurizing, if milk is to be Pasteurized.
A pie pan full of nail holes to keep bottles from the bottom of the kettle.
A tablespoon kept for this purpose only, or a long-handled aluminum spoon.
A glass or porcelain funnel.
A measuring glass, marked in ounces.
Seven nursing bottles.
A dozen nipples.
Seven rubber or glass corks to fit the nursing bottles.
A bottle brush.
A fork.

The bottles should hold eight ounces and have the scale blown on the side. The nipples should be the conical shape, which can easily be turned wrong side out.

Nipples get soft and useless if kept in soda water or other solution. It is better to sterilize them and keep them dry, and scald them just before using.

New bottles should be put in a basin of cold water which is brought slowly to a boil, and let stand until cold. Glassware so treated will not easily break when hot milk is poured into them.

Nipple holes should be large enough to let the milk drop rapidly, but not pour. It is better to buy nipples in dozen lots and never run out of a supply of good ones. If the hole is too small run a hot darning needle through the hole.

The bottle brush should always be used to cleanse the inside of the bottles. Always boil the corks and keep in a sterile covered dish until used.

Modifying Milk.

"Modifying" milk, or "humanizing" it, as the process is aptly called in New Zealand, consists in combining milk, water and sugar in the proportions which experience has taught best suit the needs of the human baby at different ages.

Amount of Milk. In general a baby will need about forty-five to fifty calories of food per pound of his normal body weight. This may be attained nearly enough by giving about one and one-half ounces of milk per twenty-four hours for every pound that the baby weighs, providing it weighs about what it should weigh for its age and height. If it is much underweight or overweight a physician's advice should be followed, as otherwise one might overfeed a baby already too fat, and fail to give a puny baby enough to gain on, and it might be a difficult matter to adapt the food to the digestion of the underweight baby.

To this amount of milk must be added water and sugar to bring the bulk up to the full amount.

During the first three months use about half and half milk and water; for the next six months use about two-thirds milk and one-third water; from nine months to twelve months gradually decrease the water until the baby is taking whole milk by one year.

After the second month barley water (see page 76) may be used instead of plain water. In the case of constipated babies use oatmeal water (see page 76).

After the fourth month vegetable extract (see page 64) may be added to the water once daily, beginning with a teaspoonful, gradually increasing to one tablespoonful by nine months.

Sugar. Sugar is added to the milk as a food, and not to make it taste sweet. Milk sugar is most often prescribed. It is expensive, however, and many babies thrive on common cane sugar. Various kinds of malt sugars are sometimes used and agree with some babies who cannot take the other kinds.

Nothing about modifying milk requires nicer judgment than determining the kind and amount of sugar. If too much is used the baby will have a diarrhœa; if too little he will be constipated. (There are many other causes for both constipation and diarrhœa, however.)

About one-eighth ounce per pound of body weight is the average amount up to a total of one and one-half to two ounces. No child should receive over two ounces in twenty-four hours. As more milk is given, the child gets more sugar in the cow's milk; therefore, decrease the amount of sugar as the child grows older.

The three kinds of sugar mentioned do not weigh the same. The measurement given in the feeding table (page 77) is for cane sugar. If milk sugar or malt sugar is used, increase the amount accordingly.

2 level tablespoonfuls of cane sugar = 1 ounce.
3 level tablespoonfuls of milk sugar = 1 ounce.
4 level tablespoonfuls of malt sugar = 1 ounce.

Preparing the Daily Ration.

In the morning the mother should prepare the day's feedings all at once. This is an economy of time and saves handling the milk, which is always liable to contaminate it.

The mother should never fail to scrub her hands and put on a perfectly clean apron before she starts to prepare the milk.

She should then assemble everything she is going to use on a clean table. If she uses bottled milk she should wipe the outside and top of the bottle with a clean cloth, turn the bottle upside down several times to mix the cream evenly with the milk, take the boiled fork and stick one prong into the center of the paper cap, lift and stand the fork so the under side of the cap touches nothing.

She may then pour the necessary amount of milk into the glass measuring cup or graduate, replace the cap and place the bottle in the ice box for family use. If the milk is produced at home, use fresh, new milk and prepare at once after the morning milking. To this is added the necessary amount of water and sugar, stir well, pour into the saucepan and bring quickly to a boil. It should not actively boil for longer than one minute. The milk is then poured into the bottles through the funnel, carefully estimating the amount to be poured into each bottle. The sterile glass or rubber stoppers are added, and the bottles may be stood in the saucepan filled with cold water until they are cool enough to put in the ice box. They should be cooled as quickly as possible and kept cold until the moment of using.

Keeping the Milk Cold.

It is absolutely necessary to have some way of keeping the baby's milk cold. The family should take ice and use a refrigerator or ice box if possible. If the price of this is prohibitive, a small piece of ice in a homemade ice box or fireless cooker will keep the baby's bottles cold through twenty-four hours. Directions for making this type of a container may be found in Farmer's Bulletin No. 353, which may be obtained free by writing to the United States Department of Agriculture, Washington, D. C.

The following description is found in the bulletin on infant care, issued by the Federal Children's Bureau (crumpled wet newspaper packed hard may be used instead of sawdust):

> "**A Homemade Ice Box.** An ice box as illustrated, which will serve to keep the baby's feedings cold for twenty-four hours, can be made at home for very small cost, as follows: Procure a wooden box about eighteen inches square, the same depth; put a layer of sawdust three inches thick in the bottom of the box; fill in with sawdust around a ten-quart tin pail or a section of ten-inch galvanized pipe, which occupies the middle of the box. Inside this pail or pipe place another slightly smaller pail, which is to hold the ice and the bottles. This inner pail should be covered, and the outer box tightly closed by a wooden cover lined with several thicknesses of newspaper. The inner pail should be taken out each morning to be emptied and cleaned. This little device will keep cool with five cents' worth of ice for twenty-four hours, or even longer. When feeding time comes the box is opened, one bottle is taken out, and the box is quickly closed again."

Where ice is out of the question the bottles may be placed in a tightly covered tin pail and hung in the well, or stood in the running water of the spring house or milk house. Directions for making an iceless refrigerator may also be obtained from the Department of Agriculture. The baby's milk should not be trusted to this, however, until it is absolutely certain that it works.

Cautions. In traveling, the baby's milk may be carried cold in a thermos bottle. *It should never be carried warm,* neither should the mother try any devices for keeping the baby's milk warm at night in order to save herself the trouble of getting up to prepare it. The mother must never forget that disease germs grow rapidly in warm milk, and that in spite of every precaution a few germs of a kind that cause bowel trouble may possibly get into the milk and increase to millions within a few hours.

How to Give the Bottle to the Baby.

When feeding time comes the mother should take one of the bottles, replace the cork with a nipple, and stand it in a pan filled with hot water. Test by letting a few drops fall on the wrist; *never by touching the nipple to the mouth.* When it feels warm to the wrist give it at once to the baby.

The mother should take the baby in her arms much as if it were going to nurse from the breast, and she should hold the bottle all the time. She should not prop the bottle up and leave the room. The baby may strangle, lose the bottle or suck air from an empty bottle.

If the baby gets the milk too fast she should take it out of his mouth occasionally. If he is inclined to play she should keep him at his job until done.

When through taking the bottle she may hold him against her shoulder and gently pat him until he raises any air he may have swallowed, then lay him quietly down. A baby should never be shaken about after nursing.

Making Changes in Diet.

Abrupt changes should never be made without a doctor's advice. If the mother's milk becomes scanty and the baby must be given additional food, *he should keep nursing regularly as long as the mother has a drop of milk.* Let him nurse the breast at the regular feeding times and *nurse the breast dry,* then give him his bottle to make up the rest that he needs. Breast milk, even when there is only a little of it, helps digest the cow's milk.

Sometimes the breast milk comes back if it is not allowed to dry up. Any baby is safer if he gets some breast milk.

When first putting any baby on the bottle one should begin with a modification for one to two months younger than the baby. Try this for several days; if it agrees, gradually bring the strength up to his age.

If giving a younger modification does not agree at first, try using skimmed milk instead of whole for a few days, as it is the milk fat which is most apt to disagree at first.

If the baby is not satisfied with the amount given in these tables for his age as shown by demanding his bottle before the time is up, or holding to it when emptied, give him the strength for the next age. This is better than feeding oftener or giving more of same mixture.

Barley Water and Oatmeal Water.

Add two tablespoonfuls of pearl barley or oatmeal to one quart of cold water. Boil slowly for two hours. Add boiling water as it evaporates, so that there will still be one quart of water when done.

Strain while hot; cool and keep on ice.

Pasteurizing Milk.

There is now considerable difference of opinion concerning the routine Pasteurizing of milk. Pasteurizing milk kills most disease germs and also kills the lactic acid bacillus which causes the souring of milk, but putrefactive organisms may survive. Milk which does not sour is not necessarily good milk. Pasteurizing will make milk somewhat safer during hot weather, but dirty milk cannot be made absolutely safe by Pasteurizing or any other process, and too often the word "Pasteurized" gives a false sense of security.

TABLE FOR FEEDING.

Average weight of baby in pounds.	Age of baby.	Number of feedings.	Total ounces in 24 hours.	Ounce of whole milk.	Ounce of water (barley water from 2 months).	Amount of sugar.	Intervals between feedings.	Hours of feeding.
7½	1st day	4	4		4		6	6, 9, 12 noon; 3, 6, 10 p. m.
*7	3d day	6	10	3	7	2 tsp	3	do.
	4th day	6	13	3½	8½	3 tsp	3	do.
	5th day	6	14	4	10	6 tsp	3	do.
7¼	7th day	6	16	5	11	1½ tbsp	3	do.
7½	10th day	6	18	5½	12½	1 oz	3	do.
	3d week	6	24	8	16	1 oz	3	do.
	4th week	6	25	8½	16½	1 oz	3	do.
8¾	2d month	6	30	12	18	1¼ oz	3	do.
	2½ months	6	32	13	19	1½ oz	3	do.
10½	3d month	6	34	16	18	1½ oz	3	do.
	3½ months	6	34	17	17	1½ oz	3	do.
12¼	4th month	6	35	18	17	1½ oz	3	do.
13¾	5th month	5	36	20	16	1½ oz.	4	6, 10 a. m.; 2, 6, 10 p. m.
15	6th month	5	38	24	14	1½ oz	4	do.
16	7th month	5	39	26	13	1½ oz	4	do.
16¾	8th month	5	41	28	13	1¼ oz	4	do.
17½	9th month	5	42	30	12	1 oz	4	do.
18	10th month	5	40	30	10	½ oz	4	do.
19½	11th month	5	36	31	5	0	4	do.
21	12th month	4	32	32	0	0	4	7, 11 a. m.; 3, 7 p. m.

*The average weight of a baby at birth is 7½ pounds, but it loses about one-half pound in the first three days.

Orange juice once daily, between feedings, from beginning of third month. Twice daily from beginning of sixth month.

One teaspoonful of vegetable extract with one feeding daily from fourth month; increase to two teaspoonfuls at six months and one tablespoonful at nine months. Add to the water instead of using barley water for that particular feeding.

If the baby has one night feeding divide total quantity into seven equal parts at first, and gradually lessen the amount of the night bottle until it is dropped by three or four months.

Pasteurizing consists in heating milk to a degree which will destroy most disease germs, but will not destroy the essential vitamines. It is now known that the addition of orange and vegetable juices to the bottle feeding replaces these vitamines, however, and there is a tendency now to feed milk which has been quickly boiled rather than Pasteurized milk.

How to Pasteurize Milk. In the Federal Children's Bureau pamphlet on infant care is found the following directions for Pasteurizing:

"*Pasteurizing.* This process consists in heating the milk to 145 degrees, holding it there for 20 minutes and then cooling it rapidly to 50 degrees. The use of one of the excellent Pasteurizers and sterilizers in the market greatly simplifies this part of the work, but satisfactory results can be obtained by the use of an ordinary pail or kettle. A convenient method for home Pasteurizing is as follows:

"Put a gallon (4 quarts) of water on the stove in a kettle. When the water is boiling hard, remove the kettle from the stove to a table and allow it to stand uncovered for 10 minutes; then put the filled and loosely corked bottles into the water, cover the kettle, and allow it to stand covered for half an hour. At the end of this time remove the bottles, cool rapidly under running water, and put in the ice box until needed. Do not uncork the bottle from the time it is first closed until the baby is to be fed."

The food and drug law of Kansas defines "Pasteurized milk" as follows:

"Pasteurized milk is milk that has been maintained at a temperature of 149° F. for twenty minutes or 158° F. for ten minutes, and immediately cooled to 50° F., or lower."

Limewater.

Science is constantly making new discoveries about the very complicated process of digestion. One of the later discoveries is that limewater tends to combine with the fat in the milk in such a way that the fat will not be easily absorbed from the intestines. Formerly "top milk" or cream and limewater were both added to "modified milk," and probably gave the baby's bowels a hard job for nothing, since the limewater made the fat insoluble. Limewater was used to break up the hard curd of cow's milk. It is now thought that barley water or other cereal water will do this as well or better.

Top milk and limewater have accordingly both been dropped from the later feeding schedules.

CHAPTER XV.

TEETH, TONSILS AND ADENOIDS.

Teething and the Teeth.

The growth of the teeth is a continuous process from seven months before the child is born until the last wisdom teeth are fully grown.

It is only when the teeth "cut through" the gums that we become aware of the growth of the tooth. Except for the slight soreness which accompanies the pushing through the tougher outer layer of the gum, the process of "teething" which we see is no different from the process going on all the time which we do not see.

Teething should never make a child sick. Because the teeth appear during a period of time when a child is changing his diet and is especially liable to digestive troubles, a superstitious notion has arisen that the teeth are to blame for every illness the baby shows. This is not only untrue, but it is very dangerous to go on this supposition.

A healthy child who is properly fed and cared for will seldom know when his teeth come through or show any sign of disturbance of health.

Once in a long, long time a child may have abnormally difficult eruption of its teeth and suffer considerable pain. Especial care should be taken in the feeding of such a child. It should be fed lightly and given all the water it will drink and taken to a doctor.

Time of Eruption. The first teeth to show are the two central cutting teeth, or incisors, on the lower jaw. These usually appear between the fourth and sixth months.

The four central upper teeth usually come next, between eight and twelve months. These also are cutting teeth, or incisors. The two other cutting teeth on the lower jaw will usually come next, making eight cutting teeth, or incisors, by one year of age.

The first grinding teeth, or molars, come between twelve and fifteen months, one on each side, above and below.

The "eyeteeth," or upper canines, and the "stomach teeth," or lower canines, appear between eighteen and twenty-four months.

The second four grinders, or molars, appear between twenty-four and thirty months, making twenty temporary or "milk teeth" by the time the baby is two and a half years old.

The first permanent teeth are the third four grinders, commonly called "the six-year molars." These come through between the fifth and sixth year. It is very important that these do not decay. The shape of the jaw will be changed and the upper and lower teeth will never fit together correctly if any of these teeth are lost.

The next set of permanent molars come through at about twelve, and the last set, the "wisdom teeth," at about eighteen. This makes thirty-two permanent teeth.

The child commonly loses all his milk teeth between 6 and 12 years.

Making Good Teeth. The pregnant woman who does not eat enough bone-forming food is robbing her unborn babe of good teeth. Many people have poor, soft teeth for this reason; also for the reason that this kind of a mother cannot make good, bone-forming milk for her babe after it is born.

Bone-forming diet is most important both for mother and child. All the care in the world cannot save poor teeth or make good teeth out of poor ones.

Fresh milk, whole cereals and plenty of fruit and vegetables are necessary to good teeth.

Using the Teeth. The baby should use his first teeth upon a hard crust or very hard cracker. Every day from that time on he should be given something upon which to practice chewing. Do this just before one feeding. Watch carefully that he does not drop his crust or cracker in the dirt. Give it to him while sitting up and he will be less likely to choke. It should be large enough that it cannot slip down his throat.

All through a child's growing years he should be trained to chew. It is a great mistake to feed a child entirely on "spoon victuals." It is much better for him to chew bread than to always soften it with something, as chewing separates and spaces the teeth properly in the jaw and toughens the gums.

Cleaning the Teeth. *A nursing baby's mouth should never be touched unless it is sore.* Nature has provided a fluid which keeps a healthy baby's mouth perfectly sweet and sterile.

From the time the teeth appear they may be wiped with cotton to remove stain and debris of food.

From the time the milk teeth are all in the child should be provided with a child's soft toothbrush and taught daily how to brush up and down inside and out. This is the imitative age, and habits formed during these years last through life.

It is not necessary to use anything on the brush, as the natural fluids of the mouth are sufficient, provided the teeth are *mechanically cleaned* and food is not left to decay between them. Children will enjoy the procedure more, however, if a little salt be placed on the brush, and this also tends to toughen the gums. There is no objection, however, to the use of good *unsweetened* tooth pastes and powders.

The soft brush should be replaced by stiffer brushes as the child grows older. The parent should never neglect to see that the child has a good brush, takes care of it and uses it daily.

Dentistry. If the teeth are never neglected from infancy up, stain and tartar will never collect on them. If the teeth should collect stain which will not brush off, the mother may take burnt matches and try to scour it off. If she is still unsuccessful the child should be taken at once to a dentist to have the teeth cleaned and polished.

Whenever the smallest cavity appears it should be filled at once. A soft filling will stop the decay; it will not hurt to have it filled, and it will save ill health, suffering and money.

Never go a second time to a dentist who says, "It is not worth while to fill milk teeth; they soon come out anyway." Go at once to a more up-to-date man who appreciates the importance of good teeth for growing children.

The second teeth will seldom be any better than the first teeth. It is now known that many of the serious diseases of later life are caused by the neglect of teeth in both infancy and later. No parent who realizes this will let a child's teeth go on to decay.

Causes of Decay. The chief cause of early decay of children's teeth is the pernicious habit of eating candy and sweets between meals. This changes the natural alkaline cleansing fluid in the mouth and makes it acid. This is bad for teeth and health. It is much better for the child to get sugar in its natural form, in fruits, beets, carrots, etc., as here it is protected by alkaline salts contained in almost all fruit and vegetables.

Medicines are also hard upon the teeth, and serious illness may seriously impair the development and quality of a child's teeth. Any preparation of iron or any strongly acid medicine should be taken through a straw or quill or glass tube.

The feeding of a child who is convalescing from any illness should be carefully studied with a view to protecting the teeth and other bones. Milk, whole cereals and fresh fruit and vegetables should all be used generously.

Tonsils and Adenoids.

Where and What they Are. Tonsils and adenoids are composed of glandular tissues. The tonsils are arranged in small masses on either side of the throat, and the adenoids are found where the nose and throat join.

Together with another very small mass on the back of the tongue, called the "lingual" tonsil, these glandular masses touch each other when swallowing and form a closed ring through which everything swallowed must pass.

This tissue helps to catch and destroy germs and other impurities, and it may have other important uses which will be better understood when science has told us still more about "internal secretions." At any rate, it stands as a ring of sentinels stationed to guard the port of entry to the body.

Enlarged Tonsils and Adenoids. When any part of the body is constantly exercised it grows larger. The blacksmith's right arm, the enlarged heart of the athlete, are examples. So with this glandular tissue in the tonsils and adenoids, when it must work all the time to take care of germs and dust which are constantly inhaled in the air which is breathed and especially when it is repeatedly infected with cold germs and irritated with dry, hot, inside air in winter, it grows, or "hypertrophies," until it can grow no larger, and somewhere along the way it is apt to break down and become diseased. Then instead of a protection it becomes a danger, and the blood absorbs poisons, which are very likely to produce rheumatism, heart disease and other ailments.

Tonsils which are large but not diseased may not injure the health, and it is worth every effort to save them until the child arrives at puberty, when they naturally tend to shrink.

Adenoids which are enlarged, however, interfere with breathing and may press on delicate structures in the nose and at the base of the brain. Adenoids should always be removed if they are large enough to really interfere with free breathing with closed mouth.

Diseased tonsils should be under the care of a specialist. If they have careful and constant treatment and are not too badly diseased they can sometimes be saved. Too often, however, there is nothing to be done but take them out. Certainly they should come out at once if the child begins to complain of joint pains or show any signs of rheumatism.

The Causes of Enlarged and Diseased Adenoids and Tonsils. 1. *Hot, dry, dusty indoor air in winter.* The antiquated custom of keeping little children indoors all winter "to keep them from taking cold" was the surest way to always have congested mucous membranes and snuffling, running noses.

The air in the average house in wintertime is by actual test drier than the Sahara desert, and it is practically never free from the dust of sweeping.

If the child does chance to get a breath of cold outside air on his breathing passages which are dry and debilitated and so entirely unable to accommodate themselves to the sudden change, of course they become congested and fall easy prey to cold germs.

2. *Living on the floor.* The baby who creeps and toddles lives in a different climate from that five feet higher, where the family live!

Every mother should put her face frequently to the floor to see what kind of air her baby breathes. Even then she cannot see or feel the dust which her feet and skirts keep constantly stirring around the baby. Even if the floors are kept very clean and the mother uses "dustless methods of cleaning," she and others constantly go and come from the street and yard and bring much dust with them on shoes and skirts.

The poor tonsils and adenoids do their best and grow and fight as long as they can, then they break down and the baby becomes a mouth breather and trouble begins in earnest.

If every child were protected from "dust and its dangers" and breathed only fresh, cool inside air in wintertime, and spent much time out of doors all the year round, diseased tonsils and enlarged adenoids would almost disappear in one generation.

Care of the Tonsils and Adenoids. 1. *Use a play pen for the creeping and toddling child,* and keep him away from "underfoot."

2. *Let every child play out of doors every day.*

3. *Protect the legs and feet* with knitted pant leggings if the floors are cold.

4. *Keep the indoor air cool and moist.* Keep pans of water evaporating on stoves and radiators.

5. *Keep the windows down a little at the top* to keep the indoor air fresh and moving all the time.

6. *Look at the child's throat often,* and teach him to gargle as soon as he begins to imitate. This can be done as a frolic with drinking water; the family may have "gargling parties." It is a great safeguard for a child to grow up with the idea that it is fun to gargle, and also to know how to open his throat to inspection and to gargle thoroughly and well. This makes it possible to discover and treat the child's throat in the beginning of trouble, and in case it goes on to a more serious condition it will be far easier to care for the throat than it will if the child must be forced to have his mouth pried open and have his throat forcibly swabbed. One such procedure is enough to inspire terror of doctors in a child for years.

This is just one more instance where the mother should seize the psychological moment to fix valuable habits for life.

CHAPTER XVI.

GETTING A STRAIGHT, WELL-DEVELOPED BODY FOR THE CHILD.

In infancy, be sure the baby's clothes do not hamper him or bind him. He should be perfectly free to move any part of his body as far as he likes at any time.

Do not put heavy covers over him and tuck them in. Do not strap him into a buggy or gocart and leave him.

Nature has put an instinct into the child which makes him want to use every muscle and every part of him.

Undress the baby, lay him on a bed or table and watch him "do his exercises." He will not leave one muscle unstretched. The thoroughness with which he will work out his body will put to shame any system of physical culture which was ever devised. If the baby is given this freedom he will have his body all ready for the next stage of his development, which is creeping.

Creeping, or going on all fours, is natural and should be encouraged. This sets the shoulders back where they belong, widens the chest and narrows the back between the shoulders. Every baby should have some chance to creep on all fours every day, but always in a room with very clean floors, and he never should creep around the feet of other people or on unwashed floors or where there is dust.

The Play Pen.

When a child begins to sit alone he should have a play pen. The play pen may be only a large flat packing box, or it may be made at home by nailing light fencing or poultry netting around a floor or platform about 2½ by 4 feet.

Very good play pens can also be purchased. Some of these are hinged so that they may be folded up and put out of the way when not in use.

Some place of this sort must be provided where the baby may have perfect physical freedom and still be out of dust and out of danger while the mother does her work, and especially where he *may be let alone.* It is very hard on both mother and baby if he must perpetually be rescued from dirt and danger, and it is impossible for him to get a strong body while living in a bed or while tied in a buggy or sitting in a "jumper."

An old bedspread or quilt may be cut in two or four pieces and a clean piece put in the bottom of the play pen every day. The baby will teach himself to walk and develop his muscles for walking by pulling himself up and down by the sides of the pen. He can creep, he can begin to walk, all in freedom and safety. His playthings also may then be kept clean and not clutter around "underfoot."

He should also, at least once every day, have a *long crawl* under favorable conditions.

Every child should have a play pen.

The Air Bath.

Also every day, when possible, every child and infant or toddler should be undressed and allowed to frolic and exercise actively while stripped. This permits the child to have absolute freedom, seasons his skin to air, and also (*very important*) *gives the mother a chance to watch her child's body grow and know whether he is straight and well developed.*

Chair and Table.

When the child begins to outgrow his play pen he should be given a small chair in which he can sit upright with his feet on the floor, and he should have a play table at which he may sit as comfortably as an adult sits at his desk or table.

He should be encouraged to sit at this table for a good many of his play activities, especially the things that he otherwise would do crouching on the floor. Do not make this an irksome requirement, however. Lead him to use his chair and table because he loves them and not because he is compelled to do so, and especially do not fret him by trying to curb or limit his activity any more than actually necessary.

Corrective Play.

Under conditions of modern family life the growing child is running all to legs. He may run, he may have a "kiddie kart" or a tricycle, *but he may not climb or dig*—the two things he most wants to do and the two things which will develop for him strong arm, back and chest muscles.

The crawling child will go up and down stairs safely before he can walk. This is splendid exercise, and he should be given frequent opportunity to go up and down a clean stairs while some one is watching him.

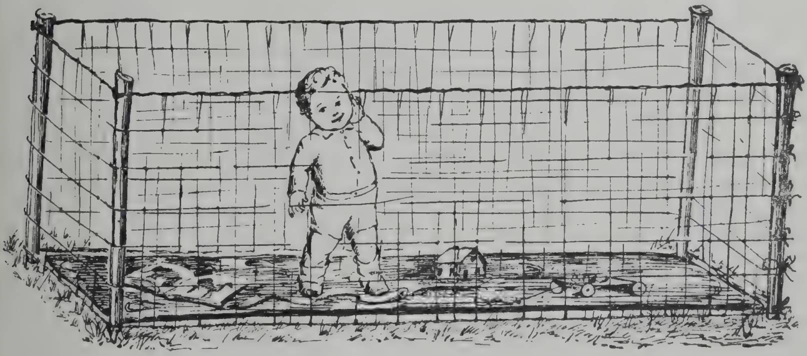
Always encourage him to come down as well as go up. Indeed, every child should be trained to get himself out of every place he gets himself into. If he is found in some dangerous place, stand near in order to rescue if necessary, but say quietly but firmly, "Now baby must come back. No, mother will stand near, but she will not help. Baby got up here; baby must come down."

This is training in self-reliance and physical efficiency. It is far better to bring up a child to take care of himself and teach him to consider whether he can get out of a place before he goes in, than it is to depend upon eternal watchfulness to keep him from getting hurt.

Above all things, do not startle children by yelling and jerking at them, and do not scold them because they are active and want to see how far they can go and how high they can go. This is natural, and within limits of safety should be encouraged.

Every possible means of strengthening and stretching the child's body should be put in his way. Instead of a seat swing, put up a hand-bar swing; if there are several children they will get splendid fun and corrective exercise from a giant stride made from a cart wheel.

A twelve-foot painter's ladder securely fastened in a slanting manner against the side of a building will be a never-failing source of pleasure and will constantly develop back, chest and arm muscles.



Outdoor play pen.

CHAPTER XVII.

TRAINING FOR MENTAL AND PHYSICAL HEALTH.

Study the Child.

Most of our difficulties with the management of children arise because we do not take time and thought to figure out what nature intends for the child to be doing at the various stages of its development, and then give him plenty of opportunity to do that particular thing.

The child wants to creep because he needs this training to prepare him to walk. He wants to climb even before he can walk, because he is still virtually "four-legged." His arms are as strong as his legs, and they should be kept strong by allowing the child to constantly suspend his weight by his hands as in climbing, hanging to a trapeze, handle-swing, etc. Instead of being curbed this instinct should be trained. The child will be much more self-reliant and have a much stronger and a more symmetrical body.

Imitation.

When the child begins to imitate, a wonderful opportunity to educate opens before the mother. The child will thoroughly enjoy learning to do things for himself. The mother should begin to teach him to dress himself and wash his hands and face carefully and nicely. He will learn to brush his own teeth, gargle, blow his nose, etc. This is the psychological time to establish the habit of doing these things carefully and thoroughly. If the mother puts the child off because it takes time and trouble to stop and enter merrily and cheerfully into the matter of training him to do correctly the things he is eager to try to do, she will probably never again be able to get the results she might have gotten had she followed nature's lead and taught the child when he was most teachable. This is almost the one and only time to establish orderly habits. *If this is not done, disorder and helplessness become habits.*

If the mother is alert to this important fact she can keep the child busy and happy by showing him how to do small tasks correctly, and she will have the joy of knowing that she is laying the corner stones of his education.

The mother must remember, however, that the rhythm of a baby's attention is very short, and his brain cells are not yet trained so that he can stick at anything. She should not urge the child beyond his interest or try to make him "do things over until he gets them right." It will be much better to wait until another day to repeat it.

Curiosity.

When the child begins to ask questions another educational opportunity opens to the mother. It has been very aptly said that if one were to follow an average, normal child about and answer his questions, simply, truthfully and fully, he would give himself a well-rounded education and do it in about half the time allotted by our clumsy school methods! At any rate, every question a child asks should be answered truthfully and frankly, just as far as the parent is able and the child can comprehend.

No child should ever be scolded, scoffed at or discouraged for asking questions. Nature means him to ask them; he cannot help asking them if he is a bright child. Rather should the parent be worried if he does not ask questions. This is the right time to teach the child to *think;* to build up organized information. Many laggards in our schools are victims of parental failure to help them at the right time.

Imagination.

When the child's imagination awakens, another world opens. The more creative ability the child is going to develop the stronger will his imagination be. His make-believe playmates and make-believe stories may seem just as real to him as the ones mother sees and hears.

The mother need not worry for fear he will develop into a liar. He will not if his parents realize the naturalness of this passing phase and let the child pass happily and quietly through it. If the parents unwisely repress the expression of the imagination they compel the child to act as if he did not have these dreams, and he really begins to be a liar on his parents' account.

Every inventor, every painter, every good mechanic, every one who does things must have the ability to dream out or imagine the details before he begins. The wise parent will help his child to fill his mind with clean, beautiful material with which to build his dreams.

Education.

The mother should not think for one moment that the child's education begins when he starts to school. She has had the sole responsibility for his most plastic years, and no teacher or system can ever undo her mistakes, or, on the other hand, no system can entirely spoil a child who has orderly habits, who can think, and who can rightly dream.

Punishment.

All punishment is a confession of weakness on the part of the individual in power. The less a parent understands his child and the less he knows about child life, the more he punishes. The weakest parent of all is the parent who inflicts pain upon the tender body of a little child, in the delusion that he is doing it for the child's good.

The parent who is fair and firm and frank and consistent, and who is high minded enough to treat the child with as much respect as he would another adult, will never need to train a child by hurting him.

The only punishment which has any educational value whatever is the natural consequence of the child's own act or some measure devised to make the child realize the logical consequences of his act. A frank, clear "talking to," with a reasonable period of solitary confinement for the purpose of "thinking things over," will be far more fruitful than the emotional explosion, bottled-up resentment and break in confidence following a whipping or outbreak of temper on the part of the parent.

Obedience.

There is a lot of unnecessary concern at present over the passing of the child who blindly obeyed its parent's slightest word. The boy who "stood on the burning deck whence all but him had fled" was a perfectly logical example of the product of this idea. He would be dubbed by this generation as a "mut" who didn't know how to think for himself or take care of himself, rather than a hero.

The parent who cannot get the idea across, to even the toddler, that he is big and wise and fair and also lovingly inflexible, can never successfully govern any child.

The wise parent will observe the following rules for obtaining obedience:

1. Get over the idea that the child must mind you because you are boss and the bigger of the two. Bullied children always bolt sooner or later, and most of them grow to hate and defy their parents.

2. Treat your child by the same code of ethics and courtesy that you do your neighbors. Do not contradict, do not interrupt and do not insult your child. Many parents use language to their children which would bring them into court were they to use it to anybody big enough to hit back. Do not tell a child to "shut up" or that "he knows he lies" and expect him cheerfully to "honor and obey."

3. Do not give impulsive, hasty or unreasonable commands. In fact, do not give "orders" at any time. The self-respect of a child is even more sensitive than that of an adult. A browbeaten child who constantly has a smothered sense of injustice is started toward anarchy and rebellion against all law.

4. Do not give commands which you more than half expect the child to break and which are not really important enough to follow up if he does break them. What is gained by saying vindictively and loudly, "There you are with that dirty cat again. If I catch you with it again to-day I shall shake you good."

5. Do not make idle threats of excessive punishments. "I'll whip you within an inch of your life" challenges the youngster of any spunk to disobedience and defiance.

6. Learn to put yourself in your child's place. Bring out your own imagination, brush it up, and try to think what your command means to your child, and take some pains to explain it to him and make it seem a fair and reasonable thing.

If he gets a wonderful idea of how he is going to make a sawing machine out of some things he gets from the basement, some from the woodhouse and a few from the kitchen, do not crossly order him to "get this stuff out from underfoot before I spank you." He has a right to roar and rebel. A little consideration would result in his happily removing his operations to a more convenient place, and to a willing substitution of other things for forbidden kitchen utensils.

7. In short, give requests rather than commands. Make them reasonable and interpret them to the mental grasp of the child. Expect him to respond, and take the response for granted. Pay the same attention to his requests and return the same courtesy required of him.

8. Avoid physical conflict. Nothing is more humiliating to the self-respect of a child or more destructive of the comradeship between parent and child than the compulsion of physical superiority.

9. Wisely ignore passing phases of behavior. Almost every child passes through a period of "tantrums." Many children begin all at once to bump

their own heads on the floor or wall. Other children will scream when thwarted.

In nearly every case this will soon pass over if utterly ignored. To attempt to force a child not to give way to this type of emotional explosions is most unwise. It simply means that the child is having his own internal troubles in harmonizing and adjusting some conflicting traits he had passed on to him by some of his unalike ancestors. To use force is to sit on the safety valve. This type of thing harmlessly spends itself if not perpetuated by unwise adults.

This may take the form of queer habits, such as making faces, explosive laughter, efforts to attract attention, etc. It is a wise parent who knows when to be blind.

Lying.

Every child tells lies, but no child is a born liar, and no child becomes a confirmed liar who is not led to become so through fear, or because he learns from his own particular experience that he can get his own way by lying.

Children are not born with a sense of right and wrong, and they do not acquire this until toward puberty.

Affection, expediency and learning by rote lead them to behave in a measure as if they had moral sense, but a child should not be expected to grasp abstract principles.

He responds to the appeal of fairness and admiration and respect, and will normally pass speedily and safely through this phase if he is dealt with fairly and truthfully.

The parent should watch this period closely, that secretiveness does not develop and traces of the trait remain; but, like other passing phases, it should normally disappear.

Lying appears at any time between three and five and lasts from a few weeks to several years. The child who is lied to or whipped or punished for lying may become a confirmed liar.

CHAPTER XVIII.

OCCUPATION AND PLAY.

Play is Education.

No one in the whole world works harder or is more in earnest than the child at play. Never again will he learn as much or as fast as he does during his play years, providing he is given freedom to play. People used to think that the preschool years were idle years and that a child played merely to fill in the time until he should be old enough to be put at some "useful task." We now know that nature teaches the child through play, and that he is educating himself and preparing himself for the serious business of living and that he is doing it with great industry and seriousness.

When a kitten chases leaves or wrestles playfully with its mother it is preparing itself to catch mice. When a little girl sets out a playhouse and plays that her doll is sick she is preparing herself for motherhood. When a boy digs a cave in the back yard or builds a coop in a tree, he is preparing himself to become a useful citizen.

Children Must Be Busy. The sooner the mother realizes this and provides her children with plenty of interesting occupations the less trouble she will have and the happier everyone will be. The mother who fails to provide interesting occupation for her active children has no one but herself to blame when they "get into mischief" in their search for "something to do."

Simple Playthings are Best. Most of the money spent for toys is worse than wasted. A flimsy, painted, ready-made toy which soon falls to pieces not only gives the child very little pleasure, but demoralizes him by its shoddy workmanship and by its example of unwise expenditure of money.

Children do not want to sit and look at a beautifully painted engine or a doll so daintily dressed and so expensive it cannot be "mothered." They would far rather spend hours putting an engine together out of odds and ends from a junk pile, or dress and undress and feed and nurse and love and discipline a homely, comfortable rag doll.

The possibilities of a box of painted building blocks are soon exhausted. The possibilities of a load of mill ends from the planing mill will never be exhausted by one family or one neighborhood.

Mothers often oppose the disposition of children to collect "junk." They cannot see what the child sees in a pile of rubbish. Clean junk is valuable play material. The mother should constantly have her children's play needs in mind and save everything they can make use of, such as string, boxes, spools, colored paper, colored rags and pieces of broken dishes, worn-out utensils, etc.

Every child should have a sand pile; a sand box is better for the baby. The sand should be boxed in so it will not be tramped into the ground. It should hold a lot of sand. Three loads at one time will last longer and give much more joy than one load three times a year.

A load of "two by fours" (seconds will do) sawed up into real bricks will provide wonderful manual training for all the children of the family, if not the neighborhood. A load of mill ends added to this will make the children happier than all the toy pianos, wagons, wooden autos and flimsy, painted toys in a whole toy store.

Girls would rather play with discarded kitchen utensils and dishes and make real mud pies than to try to "make-believe" with the useless little "sets" offered in the stores.

A Place to Play. The only way to keep children "out from underfoot" is to recognize their rights as members of the family to a place to "keep their things" and a big roomy place to play. They should have a play room if possible. A garret or attic may be given over to them. This room should be kept free from dust, but the wise mother will not nag too much about "clean dirt."

Always children should have an outdoor playground where they may collect junk, dig ditches and caves, build cities and do anything they like. A painter's ladder, a low turning pole and a low trapeze should form part of the equipment of this playground. (See chapter XVI.)

Mother and Father Should Play.

Nothing will establish a firmer bond or closer understanding between parents and children than for the parents to frequently, or even occasionally, play with them. A little tactful direction will help children to get more out of their play. When the mother "plays house" she can suggest to Mary that of course she must always wash out her dish rag and hang it in the sun, and that the sick dolly's feet must be kept warm and that baby dolls need fresh air, and show her how to put the baby's clothes on over its feet instead of its head, etc.

Father can show John how to mortise his bricks together and how to make a firm corner, how to clinch a nail and many other helpful things. Father and mother should also play "ring around a rosy" and "blind man's buff" with the children. Parents often fail to realize that children cherish the memories of this kind of comradeship and that they thus get a lifelong hold on their children.

Play for the Baby.

The first playthings go into the mouth and are in the mouth most of the time. For this reason the first playthings should be boilable. Here again simple household things give as much pleasure as those which are purchased. A teaspoon, a bottle, a small doll of white rags which can be boiled, strings of spools, butter chips, tiny pitchers, stout strings of colored glass beads, all give the baby material with which to develop coördination of his muscles and sight and keep him busy and happy. The baby should have a play pen and should never be permitted to put dirty playthings in his mouth. Sterilizing the playthings by boiling them should be one of the day's rites.

CHAPTER XIX.

THE SCHOOL CHILD.

Getting Ready for School.

During the entire five years of preschool life the mother should be looking forward to the duty and pleasure of turning that child into the public school in 100 per cent condition as far as bodily health and early training are concerned. The mother who does not do this does not do her duty to her child, and her child will carry a handicap through life because of her failure.

Every child should have a health examination once a year, and defects should be corrected as soon as they appear. In the spring, before the child is ready to start to school in the fall, he should have a very thorough examination, including tests of sight and hearing. The mother should spend the entire summer, if necessary, in "finishing up" the preparation of the child for his strenuous school life. She should be absolutely sure that he is up to normal weight, that he breathes easily and freely, that he can see well and that he can hear well. *He is not fit to go to school if he is lacking in any one of these respects.*

After the Child Starts to School.

The school child must be understood and protected at home if he is to come safely and profitably through the eight to twelve strenuous years he spends in the public school. The following may be called "ten commandments for parents of school children":

1. See that the school child gets at least nine, and preferably ten, hours sleep before every school day. There should be no going out in the evening or sitting up between Sunday evening and Friday evening.

2. See that all school children eat a nourishing breakfast and go to the toilet before going to school every morning. It is a foolish pilot who expects to get up steam in his engine without cleaning out the ashes and putting in fuel!

3. Help the older school children to so plan their work and learn to concentrate their study that they will not need to study at night. Six hours continuous, concentrated brain work is enough, if not too much, for any growing child. A little direction in method will do much in helping the child to do his work efficiently but speedily.

4. See to it that every child has outdoor exercise after school every day.

5. See to it that all the children, especially adolescent girls, go to bed with warm feet.

6. See to it that both boys and girls are dressed simply, healthfully and attractively. Well-fitting shoes with low heels and broad toes are especially important.

7. See to it that the school child is weighed every month and keep him gaining.

8. See to it that the schoolroom is properly lighted and ventilated and that the water supply and sewage disposal are sanitary and safe.

9. See to it that your school child has proper recreation and makes plenty of safe, wholesome friends.

10. Keep the confidence of your school child and tell him fully and freely everything he wants and needs to know about life. *Don't put this off.* Helpful literature on the subject of teaching sex facts to children may be secured by writing to the State Board of Health at Topeka.

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CHAPTER XX.

CONTAGIONS OF CHILDHOOD.

Common Colds.

The "common cold" is the American plague. The mucous lining of the nose and throat is one of the most sensitive and important organs of the body. When it is inflamed it cannot protect the body or perform its work. The whole body suffers and becomes less able to resist disease. For this reason many severe illnesses follow common colds. Pneumonia is one of the commonest sequels of a cold.

Prevention of Colds. Every mother should try to prevent her children from taking cold by keeping the air of the home fresh, clean, moist and cool rather than hot; by letting the children play freely out of doors every day, and by training the skin of their bodies by daily bathing and much rubbing.

She will also protect her children in every possible way from contact with persons having colds.

Every mother of a nursing child should take every precaution to keep her babe from getting the germs of the common cold. *No one should ever kiss any child on the mouth.*

If the mother has a cold she should scrub her hands before touching the baby and should avoid breathing on it. She should tie a coth over her mouth while nursing it and pour boiling water over this when she takes it off. She should not blow her nose or handle her handkerchief while caring for the baby.

Treatment of Colds. 1. Keep the child having a cold away from other children. It is not right to permit other children to become infected through any mother's carelessness. *Keep the school child at home.* This is for his own sake, in order that he may quickly get over his cold; for the school's sake, because nothing is more demoralizing to school work than an epidemic of "colds," and also because no one, not even a physician, can be sure whether it is a cold or the beginning of measles, scarlet fever or one of several other contagious diseases.

2. If the cold is slight and the sun shines, keep the child in the open air all day. This is the very best way to break up a cold.

3. If the weather is unpleasant or the child has fever, keep him in bed for one day. Provide him with plenty of quiet amusement and make it a quiet, happy day of rest. He will be a "new child" the day after.

4. Be sure the bowels are open; give a light, nourishing diet with an abundance of juicy fruits and fresh water.

5. Provide with paper napkins or rags on which to blow the nose. Pin a grocery sack to the side of the bed and let him drop them in it as used. Train him to be careful about this from the start.

6. Spray the nose with any bland atomizer oil and have the child thoroughly clean out the nose just before eating and sleeping.

When mother has a cold she should tie a cloth over her mouth before nursing the baby.

7. Teach the child to blow both sides of the nose at once without holding either nostril. Forcible blowing of one side may force infection into the middle ear.

8. Examine the throat often. If it appears red have the child gargle with salt water and put on a cold, wet compress.

9. Take the temperature every four hours if the child feels bad or appears feverish.

Remember: What appears to be a cold may be the onset of some severe illness; that colds are highly contagious; that it is easy to break one up at the start, *the very first day,* but very hard to do so if neglected for twenty-four hours.

Other Contagious Diseases of Childhood.

Pamphlets describing the cause, symptoms and treatment of measles, mumps, whooping cough, chicken pox, infantile paralysis, scarlet fever, diphtheria and typhoid fever may be obtained gratis from the State Board of Health. Every mother should write for these pamphlets and read them. Only a few especially important points will be mentioned here.

Measles. Measles is one of the most dangerous diseases of childhood. It is often followed by bronchial pneumonia, which is frequently fatal. It is also liable to be followed by eye trouble, ear trouble and throat trouble. It is also often followed by tuberculosis.

Mothers should fear measles and make every effort to keep their children from catching measles. A child who has measles should be treated as a sick child and should be under a doctor's care, as complications are more apt to follow a mild case which is neglected than a severe case which receives good care.

Whooping Cough. Whooping cough is especially fatal in infants and young children. If a school child takes whooping cough the baby in the home is the one who takes it from the school child and dies. This is one important reason why children who appear to have a cold should be kept away from other children, and especially away from the baby and younger children.

A child with whooping cough should be kept in fresh air day and night. If it vomits much it should be given liquid nourishment, such as milk, malted milk, buttermilk, plain eggnog, Pasteurized milk, etc., after every paroxysm of coughing, in order to keep up its strength.

A firm abdominal binder gives comfort in coughing and also lessens the danger of rupture. If possible, whooping cough (pertussis) serum should be used.

Chicken Pox. Chicken pox is one of the mildest of the eruptive diseases if properly treated. It should be isolated and guarded against exposure and it should always be borne in mind that chicken pox and mild smallpox are not infrequently mistaken for each other.

Smallpox. Most medical authorities now agree that the infant should be vaccinated against smallpox by the time it is six months old; surely before one year. This will probably protect it until it is ten or twelve years old, when it should be revaccinated. As the duration of immunity varies in different people, it is well after this to be revaccinated about every seven years. If one is immune it will not "take"; if immunity has run out one should know it.

Women should keep vaccinated during their childbearing years, as this disease is especially fatal to pregnant women and unborn babies.

Scarlet Fever. Scarlet fever is a treacherous disease in that it is liable to be followed by Bright's disease of the kidneys. It is also apt to leave bad results in ears, nose and throat. Any child who has had even a mild case should have the urine examined if he seems to be out of health or gains slowly afterward, and the nose, throat and ears should always be examined after convalescence.

Diphtheria. When diphtheria breaks out in a community every child should have his throat cultured to see if he may not be a "healthy carrier," and so be liable to give the disease to other childen, even though he is not sick himself.

Every child should also have the Schick test to see if he is immune or not. If not immune he may be made immune by being given immunizing doses of toxin-antitoxin. Needless to say, every child ill with diphtheria should be promptly treated with antitoxin.

Typhoid Fever. Typhoid fever is always a serious disease and involves a long illness, as it takes about three weeks to reach its crisis, and usually a similar time for convalescence.

Typhoid germs always find entrance to the body through infected food or water. Flies carry the germs to food and to utensils used to contain food or water. Drinking water from infected wells is one of the commonest sources.

Typhoid may be prevented by great cleanliness in the care and serving of food and also by inoculation with typhoid vaccine. This will immunize for about three years. This will absolutely prevent typhoid. It is especially important that the family be inoculated before starting on a trip or if there is typhoid in the community.

Mumps. Mumps is often too lightly regarded, as serious glandular involvement sometimes follows, especially if the patient is careless about exposure. Any child with mumps should be kept warm and quiet and guarded against exposure.

Infantile Paralysis. Infantile paralysis is one of the most terrible diseases of childhood, but it is less to be dreaded than formerly, as it is now known that even extreme cases will improve continuously under the present methods of "muscle training." Every mother who has an afflicted child should learn how to treat her own child, and she must persevere with single-hearted devotion, as it must sometimes be continued not only for months but through all the growing years.

Information concerning this method of treatment may be obtained from the Division of Epidemiology of the Kansas State Board of Health, Topeka.

If the child needs surgical or hospital care as well, the parents may write to the State University Hospital at Rosedale in order to learn what the state provides for such cases.

CHAPTER XXI.

ILLNESS AND EMERGENCIES.

Equipment.

Every mother should keep certain things on hand for use in the common accidents and illnesses of children. A mother who lives at a distance from a drug store and a doctor will need more than one who lives in town.

The following things should be kept in every home medicine cupboard where there are children in the family:

- 4 oz. castor oil.
- 2 oz. iodine, with jelly glass full of toothpick swabs.
- 2 oz. aromatic spirits of ammonia.
- 2 oz. syrup of ipecac.
- Jar sterile vaseline.
- One small roll adhesive plaster.
- Bandages (four narrow finger bandages, two 2-inch bandages).
- Small package sterile gauze.
- Small package of surgeon's cotton.
- One clinical thermometer. (The family doctor or a nurse should be asked to show the mother how to use it.)
- One pint of refined cottonseed oil.
- One infant syringe or catheter and funnel.
- One fountain syringe or irrigating can for older children and adults.
- Hot-water bag, or sacks of salt or sand for applying artificial heat.
- Roll of clean old muslin or linen.
- Roll old woolen pieces.
- One splinter forceps.
- One nasal atomizer (one which sprays either oil or water solution).

Patent Medicines.

Every known drug and medical substance has been studied and listed in the U. S. Pharmacopœia. No new substance has ever been found in any patent medicine.

All drugs are two-edged swords and affect many other parts and organs besides the ones they are supposed to help.

A drug may be given to dry up a cough and it may at the same time check the elimination from the skin and kidneys and constipate the bowels.

A pain relief may depress and weaken the heart action.

A patent cathartic is nearly sure to create chronic constipation.

When a mother buys a medicine about which she knows nothing except that it is guaranteed to cure a cough or the colic or "worms" does not know what injury she may be doing to some other part of her child's body.

It is both foolish and dangerous to experiment with unknown drugs.

Medicines and drugs are all right in their place, but should be prescribed for a particular condition by a physician who knows just what result he wants to get and just how long it is wise to continue to give the particular remedy.

All doctors give less medicine than they did a few years ago, because newer and better ways of treating a good many kinds of illness are now known, especially diseases which may be cured by serums, antitoxins, etc.

No mother who is wise and careful will keep or give patent medicines.

First Aid in the Household.

Indefinite Illness. When a child droops, stops playing, appears heavy-eyed, perhaps a little feverish, does not care to eat, but does not complain of any particular ache or pain, it is impossible for any one to say for sure what is "working on the child." He may have an indigestion, a cold, or he may be coming down with some serious illness.

There are certain things which should be done in any and every case without waiting to see what is going to develop:

1. Undress the child at once. Look at his throat; see if his ears are tender; if his abdomen is bloated or tender; take his temperature and write it down.
2. Give the child a large soapsuds or salt-water injection to wash out the bowel. If the fecal matter does not have the right color or odor or seems constipated, give a dose of castor oil.
3. Give a warm bath and put to bed.
4. *Keep other children out of the room.*
5. Give water to drink freely and often, but do not offer solid food. Milk or buttermilk only should be taken, and it may be better to eat nothing.
6. If throat appears red, gargle every hour with warm salt water (one teaspoonful to one pint boiled water). If there are white patches on the throat, or if the ears hurt or the glands under the chin are enlarged, report to the doctor at once.
7. If all symptoms are not better within four to six hours, or if fever continues to rise, or if temperature is over 102 degrees, or if the child coughs or jerks, complains of backache or sore spine or any other symptoms of severe illness, send for the doctor at once.

Diarrhœa. See page 55 for nursing child. For an older child, arrange to see the bowel movements and be able to describe them accurately to the doctor if it becomes necessary.

Give one rather large dose of castor oil. Give no solid food. A glass of hot milk or cold buttermilk may be given every four to six hours if condition does not become worse and child wants food.

Give all the water child can be induced to drink.

Keep exact record of number and time of bowel movements.

Take child's temperature every four hours.

If fever develops call a doctor at once. If condition is not improved within twelve hours call the doctor anyway.

Constipation. It is much better to prevent than to treat constipation. (See page 56.) If a child is properly fed and goes to the toilet at a regular hour he will seldom or never become constipated.

If a child's bowel does need cleaning out, castor oil from above and an enema (injection) to wash out the lower bowel is all that will be necessary in any case.

Lasting injury may be done to a child's bowel by the indiscriminate giving of physics.

Never put any child to bed whose bowels have not moved during the preceding twenty-four hours. Give an enema just before bedtime, so the child will not absorb poisons from his bowels all night.

Convulsions. A child coming down with an illness will have a convulsion where an adult will have a chill.

A convulsion may be caused by poisons from undigested or putrefying food in the bowel or by the poison of disease in the blood.

The first thing to remember is that, while a convulsion is a terrifying thing to look at, yet children practically never die in convulsions.

The mother must not lose her head. She should do three things and do them quietly and efficiently: First, apply heat; second, call a doctor; third, empty the bowel.

If enough warm water can be quickly obtained to cover the baby, put the child in a warm bath as quickly as possible. Be sure the water is only pleasantly warm to the elbow, but *do not burn the baby.*

If the convulsion is a severe one do not try to undress the baby; put it in clothes and all, and undress it after it relaxes.

If only a little warm water is quickly available, give a warm foot bath while more water is heating. Put a little mustard in this, but never put mustard in a full body bath, especially with the clothing on. It is very easy to cruelly blister and irritate the tender skin, and it is not necessary.

Always put a cold, wet cloth on the child's head while in the hot bath. Take out of the bath just as soon as the spasm relaxes. Dry carefully and keep the child very quiet. While sending for the doctor wash out the child's bowel, but use a bedpan and disturb the child as little as possible while doing it.

When the child becomes quiet take the temperature and write it down.

If the child has fever or complains of headache, keep a cold wet cloth on the head.

Worms. Never give patent worm medicine, and never doctor for worms without being *sure* the child has them.

Round worms are near the size and somewhat the appearance of small fishworms. Seat worms, or thread worms, are very small, resembling bits of very fine white thread. Be sure that bits of vegetable fiber are not mistaken for worms.

The traditional symptoms of worms, such as "picking the nose," "a white line around the lips," etc., are entirely unreliable, and no child should ever be dosed with worm medicine because of these. He is more apt to be suffering from chronic constipation.

Worm medicine is very powerful and irritating to the bowel. It should never be given without a doctor's orders.

Worms will very seldom appear in a child whose bowels are regular and in a healthy condition. It is usually a reflection on the mother's intelligence and care when a child develops worms.

Cough. When a child has a cough watch his condition very carefully; take his temperature every four hours and report promptly to a doctor if fever develops.

Do not give cough mixtures which are not prescribed for the particular case, as what will help one kind of a cough will make another kind worse.

A cold, wet compress around the throat will relax the muscles and make a child more comfortable, especially at night. To apply a cold compress wring a couple of Turkish wash rags out of very cold water, apply to throat and wrap throat in dry towel to protect clothing from dampness.

At the very beginning of a cough lighten the child's diet, giving him an abundance of liquids, with but little solid food. Be sure the bowels are free. *Keep him away from school and from other children.*

One day in bed will usually clear up a bronchial irritation. This easily runs on into weeks if it gets "fastened on" a child.

Croup. There are two kinds of croup—spasmodic and membranous.

Membranous croup. This is one form of diphtheria. The child chokes and struggles for breath because he is being strangled by the membrane which is growing in his breathing passages, and he will very quickly die if not relieved.

Membranous croup comes on gradually. The child droops and appears out of health, has some temperature and has a hoarse, "brassy" cough, and it gradually becomes more difficult for him to breathe. This becomes so difficult finally that he begins to struggle for breath and gets blue in the face. This stage may be reached in twenty-four to forty-eight hours from the beginning of the trouble. The mother should watch sharply for this type of illness and get medical attention (which means diphtheria antitoxin) in time to avoid this terrible crisis.

Spasmodic croup. In spasmodic croup the child goes to bed apparently as well as usual, or he may have had a slight cold or a mild digestive disturbance. The attack comes on suddenly and violently. He wakes up with a shrill, whooping cough and struggles for breath. This is terrifying but not dangerous. The mother should keep calm and assure herself that the child is not going to choke to death. She should heat water as quickly as possible, wring a couple of wash rags or a small Turkish towel out of hot water (see page 100 for directions for wringing hot compresses) and apply to child's throat. Make the child drink at least a pint of water as hot as he will take it. A little salt may be added to the water. Keep the child warmly covered. A cold, wet compress will relax the spasm almost as quickly as the hot application.

If this does not relax the spasm within a few minutes the child must be made to vomit. Drinking more warm water to which butter or oil or grease of any kind has been added will usually be effective.

In an emergency wrap a clean rag around the forefinger and tickle the child's soft palate. Be careful not to scratch or injure the throat.

Breathing steam is also good. Bring a teakettle of boiling water to the side of the bed, raise an umbrella and place over the child; throw a blanket over this and let the blanket also cover the spout of the teakettle. If possible keep boiling with a sterno lamp. Drop a red-hot stove hook or other small iron article in the water to keep up steam, if no small heater is at hand. Do not continue this steaming for more than ten to twenty minutes.

Where children are subject to croup it is well to keep a couple of ounces of syrup of ipecac on hand. A teaspoonful will cause the child to vomit up the phlegm and will relieve him.

After the attack is over the child will be very much relaxed, tired out and sweating, and will take cold easily. He should be well rubbed all over with a rough towel and have warm, dry clothing and bedding. He should not be kept so warm he will continue to sweat.

Children who play freely out of doors but have their feet kept warm and dry and sleep with open windows seldom have croup.

Toothache. It is far better to prevent toothache, as toothache always means neglected teeth. For immediate relief wrap a bit of cotton about the small end of a toothpick wet in clove oil, if available; if not, wet it in any alcoholic extract or hot stuff which is at hand—Jamaica ginger, camphor, a drop of carbolic acid in a teaspoonful of water, or even vanilla or lemon extract or red-pepper tea. Apply heat to the face and take to the dentist without delay.

Earache. Suspect earache in an infant who cries, turns head from side to side, cries out when head is moved or ear touched.

Fill a small sack about half full of salt or sand, heat it in the oven, fold in a soft cloth, and apply to the ear. See a doctor as soon as possible.

Foreign Body in Eye. Wash hands in soap and hot water; scrub nails. Carefully seize lash of upper lid, pull it down over the lower lid and hold for several seconds. The lashes of the lower lid will act as a brush, and usually the substance will stick to them.

If this is not successful wash the eye out with warm boric-acid solution or boiled water. The solution should be kept tepid or "blood warm." Lay the child on his back, separate the lids with the first and second fingers of the left hand and gently drop in several pipettes of the solution. In the absence of a pipette use a clean teaspoon, and let the solution dribble in.

Sometimes the object can be seen; in this case roll a clean handkerchief to make a sharp corner and pick up the object with it.

For a Bruise or Blow to the Eye. Apply either hot or cold compresses for twenty minutes at a time; repeat every two hours. Either heat or cold will reduce the pain and inflammation, *but it must be one or the other.* If the application is hot, it must be kept hot; if cold, it must be kept cold.

Foreign Body in Ear. If the child has pushed a seed into his ear it will be safer to use warm oil, as water may cause it to swell. Fill the baby's infant syringe with either warm oil or water and gently syringe out the ear until the object comes away. *Do not try to remove it by poking or digging.*

Foreign Body in the Nose. Get the child to blow while holding the other side. Provoke sneezing by inhaling pepper or powdered spice of some kind. (Protect the eyes with a wet cloth while doing this.) Never try to remove by force. If child cannot blow or sneeze it out, see a doctor.

Foreign Body in Throat. If a child chokes on something, a smart slap on the back or shaking by the heels will usually dislodge; next try to reach it with finger, but do not be too excited to do so carefully and gently.

If it has really entered the windpipe, try to control the child's panic and get him to try calmly to breathe anyway, and get him to a doctor with all speed.

If the child swallows something do not worry unless it was something sharp or possibly poisonous. Give the child a dry, rough diet and watch the stools until the article comes through. If the article has sharp corners or points it is safer to take to a physician and have it located and watched with an X-ray.

Small Scratches, Cuts and Bruises. Dip a toothpick swab in iodine and paint thoroughly. Do this even with the smallest break in the skin. Small injuries heal best without a dressing. If too large to scab over quickly, place a bit of surgical gauze over it and bandage.

Deep Wounds and Cuts. A cut made with a sharp, clean knife *and which bleeds freely* may be drawn together carefully without touching the skin surrounding it. The skin should then be swabbed with iodine and a dressing of surgical gauze snugly applied with adhesive plaster or a bandage.

If the wound is ragged or has been made with anything which has touched the soil, or with a blunt or dirty instrument, or if it is a puncture wound such as is made with a nail or a splinter, it should be thoroughly washed out by slowly pouring over it from a pint to a quart of water (boiled and allowed to cool), to which a level teaspoonful of salt per pint has been added. Swab with iodine and take at once to a doctor, as tetanus germs abound in the soil and a few of them may remain in some tiny place in the torn flesh and produce lockjaw.

A kick from a horse's hoof, or puncture from a rake tooth, pitchfork or a nail are especially liable to produce lockjaw.

Bruises. When the skin is not broken apply hot or cold compresses.

Burns. For small burns which only redden the skin or for small deep burns bind on a wet compress, wet in soda water.

For a blistered surface apply sterile vaseline on a piece of surgical gauze. Do not break the blister if it can be avoided. If necessary to open a blister, prick it at the lower edge with a needle which has been held in a flame to sterilize it.

For a large burn, if on the hand, arm or foot, prepare a foot tub, wash bowl, dish pan or other receptacle large enough; scald and scour it quickly, fill with warm salt water (about one tablespoonful to the gallon), and immerse the injured part in this. Carefully cut away the garments. Replace with clean water, but keep it covered with the water until the doctor arrives.

If the burn is in a place which cannot be immersed, cover it with thick, soft cloths wet in either salt water or soda water.

If necessary to take the patient to a doctor, keep the burn covered with the wet dressing.

Considerable shock sometimes follows a burn, and there may be absorption of very poisonous material from the burned surface. Moreover, the newer methods of dressing burns with flexible wax can only be used by a physician. Therefore, do not neglect burns that are at all serious.

Shock. If a child has a hard fall or is knocked breathless or collapses, or faints from fright or injury, lay it flat down without a pillow; give fresh air; bathe face with cold water. Examine for broken bones.

As soon as able to swallow, give a hot drink. Keep everybody quiet and away from sight and hearing of the child, and allow absolute rest.

Send for the doctor if child does not come to and improve within a few minutes.

Insect Bites and Stings. Insect bites should be dressed with a pad of soft, clean rag wet in soda, alcohol, ammonia, lime water, soapsuds, borax or other mild alkali.

Snake Bites. If a poisonous snake, quickly tie a stocking, handkerchief or other cloth loosely above the wound, place a pencil or stick under it and twist it tight enough to shut off circulation. Suck the wound, spitting out all saliva while so doing. After ten minutes loosen the bandage for a few seconds to let new blood to the limb (otherwise gangrene may result); then repeat until sure the person is not going to be severely poisoned.

Get a doctor as soon as possible. Put to bed and keep quiet until he arrives.

Dog Bites. If a healthy pet merely nicks a child's hand in play, treat as any other small wound with iodine and bandage.

If a dog or other animal has intentionally bitten a child, *shut up the animal and treat it kindly and well until it becomes certain as to whether it is mad.* Swab the wound quickly and thoroughly to the very bottom with iodine and get the child to a doctor as soon as possible, so he may get antirabic treatment from the State Board of Health and give the child the benefit of any doubt.

Nail Biting. *Have the child's nails manicured.* Children bite their nails because the nerve endings are extremely sensitive. Many persons cannot bear the slightest roughness on the edge of a nail. Make and keep the child's nails so smooth he cannot find a snag to bite. One visit to a manicurist with regular use of nail file afterward should cure every case.

Bed Wetting. This is often the result of lack of early training. (See page 54.) Sometimes the child needs circumcision; sometimes the child needs treatment for nervous instability.

Treatment. Never punish or humiliate, and never give bedtime medicines without definite orders from a doctor who has given the child a thorough examination. *Each is an injustice and an injury to the child.*

Study the case carefully and have a physical examination made. If it seems quite certain that it is only a habit, begin patiently and persistently to correct it. No habit can be quickly broken; it is a matter of retraining.

First, take the child into your confidence and get his coöperation. A confidential arrangement which will save the child's self-respect will arouse him to make a real effort. With small children the promise of a gift or a treat is legitimate. With older children the kindly, frank talk is sufficient.

Second, watch for several nights and make a schedule of the hours the accident is likely to occur.

Nervous children sometimes urinate as soon as they sink into a deep sleep and really relax. This kind of child should lead a very quiet life and should be kept especially quiet and tranquil in the evening. When he goes to the toilet at bedtime let him listen to trickling water, and let him sit quietly on the toilet while mother tells a story or diverts his attention.

If it is found that the child urinates at a certain hour later in the night, set an alarm clock to go off just before this time and get the child up. Set the clock a few minutes later every evening until he "graduates."

Putting a diaper on an older child (kindly, not as a humiliation) will sometimes serve to remind him to get up.

The child may be limited as to fluids, such as water and milk, after four or five o'clock, *provided he has had his full twenty-four-hour ration of fluids earlier in the day.*

One of the most stupid things, next to giving medicines, that is ever done to poor bed wetters is to limit them in the fluids necessary to their health. Patience and perseverance are necessary and will have their reward if the parent is wise and kind.

Masturbation. Masturbation means the habit of handling the genital organs. Every young child does this occasionally as unconsciously and innocently as he touches any other part of the body. He must be gently and persistently trained to not do this, but too much emphasis, especially harshness, may often overshoot the mark and arouse morbid curiosity and lead to the secret practice of the thing the parent wishes to prevent.

In very many instances children are led to think of the genital organs because they are uncomfortable and irritated. This may be from dirt, secretions or clothing. Children play in dirt and dust and do not cleanse the genitals carefully after going to the toilet. Secretions collect under the foreskin of the boy, and sometimes under the folds of the clitoris in the girl. Diapers, especially three-cornered diapers on boy babies, often irritate and rub. Rough seams in the underwear of older children may chafe the parts.

Boys may be irritated because they need circumcision and girls because the clitoris is adherent. Every mother should see that the genital parts are carefully bathed *every day*; that the clothing covering these parts is clean and does not rub. If a child still continues to masturbate it should be examined by a physician.

Sometimes children, both boys and girls, are taught this habit by older children who have become sexual perverts. This is better prevented by great care as to the associates of young children.

Older children who have formed this habit are difficult to manage. *Force never reforms a child from this habit.* Fright may deter for a time; if it does, however, it is apt to make a morbid coward of a child.

The only efficient way is to replace these thoughts and suggestions with interesting, stimulating, constructive activities. Stories of knighthood, personal hygiene, Boy Scout membership, an abundance of clean outdoor sport, frank, full, clean sex instruction appropriate to the age, and more jolly fellowship between parents and children will reform any but a real pervert. These are exceedingly rare.

Masturbation occurs very frequently among feeble-minded children. Masturbation does not cause feeble-mindedness, however; neither does it cause insanity or any of the other hideous things commonly attributed to it. It is wrong to terrify a child by such tales. The habit is disgusting and leads to secretiveness, loss of self-respect, and may later lead to perverted sexual practices. These are reasons enough for using any and every means to prevent and cure it. It is far better to appeal to a child's desire to be strong and manly than to fill his imagination with lurid, overdrawn pictures of terrible and impossible consequences.

Circumcision. The foreskin may be so long and the opening so small at birth that urination is difficult and proper cleanliness impossible. This may lead to convulsions, nervousness, and later to masturbation. Every male child should be carefully examined at birth for this condition. If it exists it should be corrected in very early infancy by stretching or circumcision.

Poison Ivy. Wash the skin thoroughly with plenty of soap as soon as exposed if it is known that poison ivy has been touched. Wet compresses of magnesium sulphate (Epsom salts), all that will dissolve in water (saturated solution), will give some relief.

Hives. Hives are caused by eating some kind of food to which the person is susceptible. Some persons cannot eat strawberries without breaking out in hives; others get them from eating fish; others from eggs, bananas, etc. The quickest relief is to clean out the bowel, eat lightly, drink more water, sleep plenty, and avoid the cause if known. For the itching, bathe with soda water.

Boils. A hot, wet compress will hasten the "coming to a head." As soon as the white spot appears it should be opened with a sterile knife or needle and thoroughly emptied. Swab with iodine and put on a dry, gauze dressing.

If a child has a second boil or a series of boils it is a sign his resistance is low. He should get an abundance of sleep and eat freely of fresh vegetables, especially spinach, tomatoes, etc., and drink plenty of milk. Salt baths daily with thorough rubbing of the skin will help prevent them.

Lice. Even the cleanest children may get lice from other children at school. Wet the scalp and hair thoroughly with tincture of larkspur, tie up in a towel overnight and shampoo the next morning. Coal oil and vaseline thoroughly mixed together and rubbed into the scalp and hair in the same manner is effective but not as pleasant to use.

Itch. This also may be caught at school. Get a sulphur ointment from the doctor and use as directed. Every bit of clothing and bed linen should be thoroughly boiled and sterilized or the child will reinfect himself.

Poisons. Here again prevention is better than cure. Do not keep poisonous drugs in the house. If kept for a special purpose, throw what is left away. Lye, muriatic acid or other poison should be carefully put away.

In general, the first thing to do when it is feared that a child has swallowed poison is to get rid of the poison or as much of it as possible. Make the child vomit by drinking quantities of warm water; force it down until it comes back. This is better than a strong emetic, as it thoroughly washes out the stomach and the child does not retch and strain so hard.

Salt, mustard, oil or almost anything can be added to the water to make the child throw it up more quickly. It is the water, however, which does the work.

If an irritant poison has been swallowed, which has burned the lining of the throat, give, as soon as vomiting has stopped, the white of egg, milk, cream or starch water to soothe the raw surface.

If lye or other alkaline has been swallowed, give vinegar and water, lemon juice or other acid to stop the action.

If carbolic acid has been taken, give alcohol and water, or anything which contains alcohol, if possible to obtain, as this will instantly stop the action of the acid. If nothing containing alcohol is at hand, give anything which is fermenting—cider, yeast, vinegar mother, etc.

Do not cause vomiting if carbolic acid has been swallowed. Give white of egg, skimmed milk, starch, but do not give grease or oil, as this dissolves the carbolic acid and makes it burn more deeply.

Phosphorus. Children sometimes eat match heads and get phosphorus poisoning. *Do not give oil or grease, as it hastens absorption of the poisons.* Give starch, egg, lime water, flour and water.

Strychnine. Strychnine tablets are often used as a stimulant in severe illness, and children have been known to find and eat a number at a time. Wash out the stomach freely and keep the child very quiet in a still, dark room. It will be very easily thrown into convulsions. Get a doctor with all speed.

Opium. The effect of opium preparations, such as morphine, paregoric, laudanum, codein, heroin, etc., is just the opposite to strychnine. The child will be stupid and hard to arouse, the pupils of the eyes will be very small and the breathing very slow. Give stimulants, such as black coffee or aromatic spirits of ammonia one-half to one teaspoon full in water, and keep moving and rub the skin of the body while the doctor is coming.

Drowning. Hang the body head down until all the water has run out of the mouth that will. Place face down, with roll of something under waist line just below the ribs. Turn face to one side, pull tongue well forward, and have some one wrap fingers with a cloth and hold it. Straddle the hips, spread the hands to cover the small of the back, thumbs together, heels of the palms against the back just above the waist line. Then press suddenly and firmly against the body in such a way as to force the air out of the lungs. Count regularly and slowly—one, two; one, two—down two counts, up two counts, so the air can rush in and out of the lungs about as fast as in ordinary breathing.

This is "artificial respiration." Keep this up steadily, regularly and ceaselessly for several hours if life does not return sooner. Life has been restored in this manner after hours of effort.

If help is present, have the body warmly covered and rubbed while this is going on. As soon as breathing is restored, give warmth, rest and stimulants.

CHAPTER XXII.

WEIGHT AND GROWTH.

Importance of Weighing. Increase in weight is the surest index to growth. The infant should be weighed once each week, on the same day of the week, until one year old; then once each month until entirely grown.

The weight tables in this book have been made by averaging the weights and heights of many thousands of children. A child who is as much as ten per cent below or twenty per cent above these tables is quite sure to have something the matter which should have immediate attention.

No family should think of raising children without scales and a monthly weight record of every child. No mother should fail to keep a weekly weight chart of her nursing baby. The weight chart may save the life of the bottle-fed baby.

Fill out the weight curve in this book for the child under one year, and use the monthly weight record for the older children. If in doubt as to how to make a weight curve for the baby under one year, the mother should ask a nurse or doctor to show her how to start it.

After the first week no child should ever lose weight or remain stationary. Something is wrong if he does.

-Chart showing average increase in weight of Babies by Weeks-

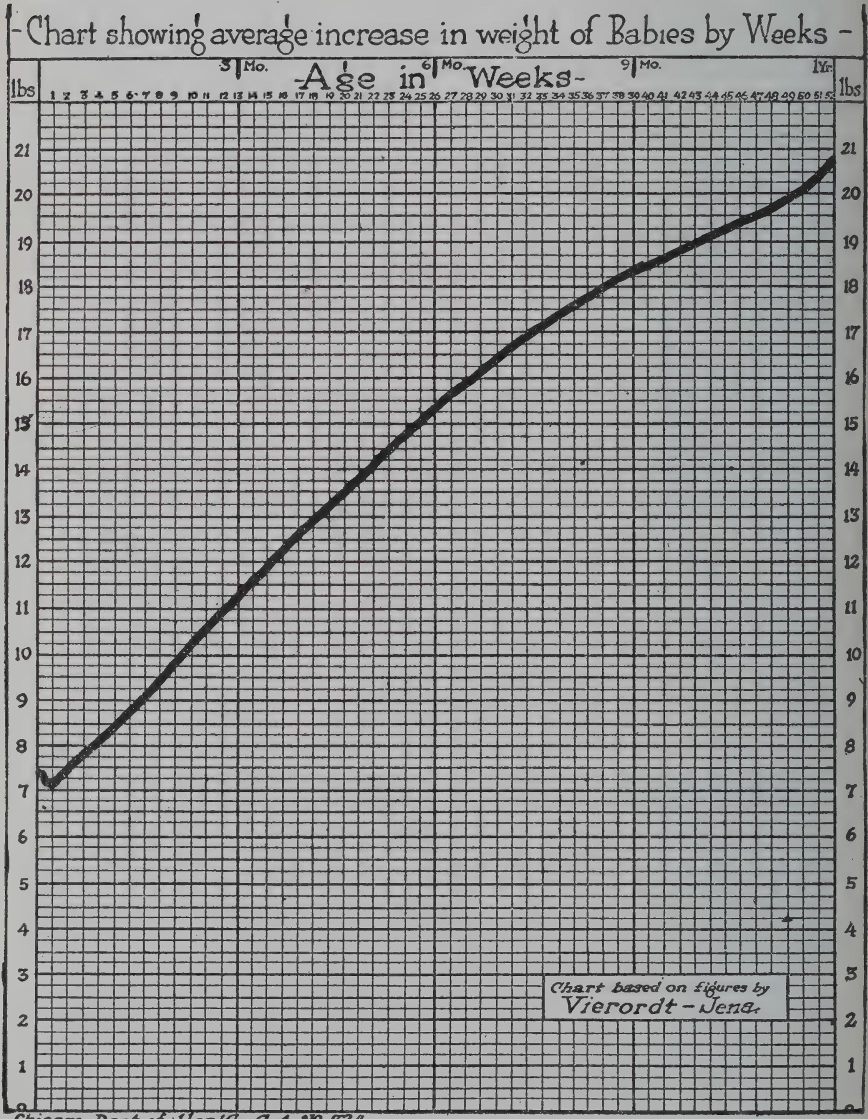

Chart based on figures by
Vierordt-Jena.

Chicago Dept of Health-Cut No 324.

Weight Record for Children.

Weigh and measure children in nightgowns without shoes. Weigh on same day each month. Enter age nearest birthday. Where there are no scales in the home, children may be taken to a school or store, in which case remove shoes and coats. State which method is used.

NAME.	Age.	Height.	Normal weight.	Year.......... Actual weight.											
				Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.

Stature and Weight of White Children from Birth to Six Years of Age.

(United States Department of Labor, Children's Bureau.)

AGE.	Boys.		Girls.		AGE.	Boys.		Girls.	
	Stature (inches).	Weight (pounds).	Stature (inches).	Weight (pounds).		Stature (inches).	Weight (pounds).	Stature (inches).	Weight (pounds).
Under 1 month	21.16	9.11	20.89	8.65	36 months, under 37	36.68	30.75	36.25	29.51
1 month, under 2	22.47	10.88	21.92	10.14	37 “ “ 38	36.89	31.04	36.48	29.82
2 months, under 3	23.58	12.61	23.09	11.71	38 “ “ 39	37.11	31.34	36.72	30.13
3 “ “ 4	24.55	14.07	24.00	13.03	39 “ “ 40	37.34	31.67	36.96	30.46
4 “ “ 5	25.38	15.37	24.83	14.25	40 “ “ 41	37.57	32.01	37.21	30.79
5 “ “ 6	26.10	16.30	25.53	15.32	41 “ “ 42	37.81	32.36	37.46	31.12
6 “ “ 7	26.72	17.47	26.15	16.26	42 “ “ 43	38.05	32.71	37.70	31.44
7 “ “ 8	27.27	18.31	26.70	17.09	43 “ “ 44	38.29	33.05	37.92	31.73
8 “ “ 9	27.76	19.04	27.20	17.81	44 “ “ 45	38.51	33.36	38.13	32.00
9 “ “ 10	28.21	19.68	27.66	18.45	45 “ “ 46	38.72	33.65	38.33	32.27
10 “ “ 11	28.65	20.27	28.10	19.03	46 “ “ 47	38.91	33.91	38.52	32.53
11 “ “ 12	29.06	20.81	28.51	19.56	47 “ “ 48	39.09	34.14	38.70	32.77
12 “ “ 13	29.47	21.32	28.91	20.04	48 “ “ 49	39.25	34.36	38.89	33.04
13 “ “ 14	29.87	21.82	29.30	20.51	49 “ “ 50	39.42	34.59	39.08	33.30
14 “ “ 15	30.26	22.31	29.69	20.96	50 “ “ 51	39.59	34.82	39.27	33.56
15 “ “ 16	30.64	22.78	30.08	21.42	51 “ “ 52	39.77	35.06	39.47	33.84
16 “ “ 17	31.02	23.25	30.47	21.88	52 “ “ 53	39.96	35.33	39.69	34.16
17 “ “ 18	31.39	23.72	30.86	22.35	53 “ “ 54	40.18	35.63	39.91	34.47
18 “ “ 19	31.76	24.18	31.24	22.81	54 “ “ 55	40.40	35.94	40.14	34.80
19 “ “ 20	32.11	24.62	31.60	23.26	55 “ “ 56	40.62	36.27	40.36	35.13
20 “ “ 21	32.45	25.04	31.93	23.68	56 “ “ 57	40.83	36.61	40.58	35.44
21 “ “ 22	32.76	25.45	32.24	24.07	57 “ “ 58	41.03	36.94	40.79	35.74
22 “ “ 23	33.06	25.84	32.53	24.45	58 “ “ 59	41.22	37.28	40.98	36.04
23 “ “ 24	33.34	26.21	32.81	24.81	59 “ “ 60	41.40	37.60	41.16	36.34
24 “ “ 25	33.62	26.58	33.09	25.17	60 “ “ 61	41.57	37.91	41.34	36.64
25 “ “ 26	33.89	26.95	33.37	25.54	61 “ “ 62	41.75	38.20	41.52	36.93
26 “ “ 27	34.16	27.31	33.66	25.92	62 “ “ 63	41.93	38.48	41.69	37.23
27 “ “ 28	34.43	27.68	33.95	26.31	63 “ “ 64	42.11	38.75	41.86	37.52
28 “ “ 29	34.71	28.06	34.24	26.70	64 “ “ 65	42.31	39.05	42.03	37.80
29 “ “ 30	34.99	28.45	34.53	27.09	65 “ “ 66	42.51	39.36	42.20	38.09
30 “ “ 31	35.27	28.83	34.82	27.48	66 “ “ 67	42.71	39.69	42.38	38.42
31 “ “ 32	35.54	29.20	35.09	27.85	67 “ “ 68	42.91	40.03	42.58	38.74
32 “ “ 33	35.79	29.56	35.34	28.20	68 “ “ 69	43.10	40.39	42.81	39.14
33 “ “ 34	36.02	29.88	35.58	28.54	69 “ “ 70	43.32	40.72	43.03	39.53
34 “ “ 35	36.24	30.18	35.81	28.88	70 “ “ 71	43.48	41.17	43.39	40.17
35 “ “ 36	36.46	30.47	36.03	29.20	71 “ “ 72	43.87	41.40	43.52	40.36

Height and Weight Table for Girls.

Height Inches.	5 Yrs.	6 Yrs.	7 Yrs.	8 Yrs.	9 Yrs.	10 Yrs.	11 Yrs.	12 Yrs.	13 Yrs.	14 Yrs.	15 Yrs.	16 Yrs.	17 Yrs.	18 Yrs.
39	34	35	36											
40	36	37	38											
41	38	39	40											
42	40	41	42	43										
43	42	42	43	44										
44	44	45	45	46										
45	46	47	47	48	49									
46	48	48	49	50	51									
47	....	49	50	51	52	53								
48	....	51	52	53	54	55	56							
49	....	53	54	55	56	57	58							
50	....	....	56	57	58	59	60	61						
51	....	....	59	60	61	62	63	64						
52	....	....	62	63	64	65	66	67						
53	....	....	.....	66	67	68	68	69	70					
54	....	....	.....	68	69	70	71	72	73					
55	....	....	.....	.....	72	73	74	75	76	77				
56	....	....	.....	.....	76	77	78	79	80	81				
57	....	....	.....	.....	.....	81	82	83	84	85	86			
58	....	....	.....	.....	.....	85	86	87	88	89	90	91		
59	....	....	.....	.....	.....	90	90	91	93	94	95	96	98	
60	....	....	.....	.....	.....	.....	94	95	97	99	100	102	104	106
61	....	....	.....	.....	.....	.....	99	101	102	104	106	108	109	111
62	....	....	.....	.....	.....	.....	104	106	107	109	111	113	114	115
63	....	....	.....	.....	.....	.....	109	111	112	113	115	117	118	119
64	....	....	.....	.....	.....	.....	.....	115	117	118	119	120	121	122
65	....	....	.....	.....	.....	.....	.....	117	119	120	122	123	124	125
66	....	....	.....	.....	.....	.....	.....	119	121	122	124	126	127	128
67	....	....	.....	.....	.....	.....	.....	.....	124	126	127	128	129	130
68	....	....	.....	.....	.....	.....	.....	.....	126	128	130	132	133	134
69	....	....	.....	.....	.....	.....	.....	.....	120	131	133	135	136	137
70	....	....	.....	.....	.....	.....	.....	.....	.....	134	136	138	139	140
71	....	....	.....	.....	.....	.....	.....	.....	.....	138	140	142	143	144
72	....	....	.....	.....	.....	.....	.....	.....	.....	....	145	147	148	149

Height and Weight Table for Boys.

Height, Inches.	5 Yrs.	6 Yrs.	7 Yrs.	8 Yrs.	9 Yrs.	10 Yrs.	11 Yrs.	12 Yrs.	13 Yrs.	14 Yrs.	15 Yrs.	16 Yrs.	17 Yrs.	18 Yrs.
39	35	36	37											
40	37	38	39											
41	39	40	41											
42	41	42	43	44										
43	43	44	45	46										
44	45	46	46	47										
45	47	47	48	48	49									
46	48	49	50	50	51									
47	....	51	52	52	53	54								
48	....	53	54	55	55	56	57							
49	....	55	56	57	58	58	59							
50	....	....	58	59	60	60	61	62						
51	....	....	60	61	62	63	64	65						
52	....	....	62	63	64	65	67	68						
53	....	....	.....	66	67	68	69	70	71					
54	....	....	.....	69	70	71	72	73	74					
55	....	....	.....	.....	73	74	75	76	77	78				
56	....	....	.....	.....	77	78	79	80	81	82				
57	....	....	.....	.....	.....	81	82	83	84	85	86			
58	....	....	.....	.....	.....	84	85	86	87	88	90	91		
59	....	....	.....	.....	.....	87	88	89	90	92	94	96	97	
60	....	....	.....	.....	.....	91	92	93	94	97	99	101	102	
61	....	....	.....	.....	.....	.....	95	97	99	102	104	106	108	110
62	....	....	.....	.....	.....	.....	100	102	104	106	109	111	113	116
63	....	....	.....	.....	.....	.....	105	107	109	111	114	115	117	119
64	....	....	.....	.....	.....	.....	.....	113	115	117	118	119	120	122
65	....	....	.....	.....	.....	.....	.....	.....	120	122	123	124	125	126
66	....	....	.....	.....	.....	.....	.....	.....	125	126	127	128	129	130
67	....	....	.....	.....	.....	.....	.....	.....	130	131	132	133	134	135
68	....	....	.....	.....	.....	.....	.....	.....	134	135	136	137	138	139
69	....	....	.....	.....	.....	.....	.....	.....	138	139	140	141	142	143
70	....	....	.....	.....	.....	.....	.....	.....	.....	142	144	145	146	147
71	....	....	.....	.....	.....	.....	.....	.....	.....	147	149	150	151	152
72	....	....	.....	.....	.....	.....	.....	.....	.....	152	154	155	156	157
73	....	....	.....	.....	.....	.....	.....	.....	.....	157	159	160	161	162
74	....	....	.....	.....	.....	.....	.....	.....	.....	162	164	165	166	167
75	....	....	.....	.....	.....	.....	.....	.....	.....	.....	169	170	171	172
76	....	....	.....	.....	.....	.....	.....	.....	.....	.....	174	175	176	177

DEFINITIONS OF WORDS AND TERMS.

Conception. The union of the female ovum with the male sperm cell. This is also called fertilization. The condition of a woman after conception takes place is called pregnancy.

Calorie. The measure of food heat and energy in the body. The calorie corresponds to the candle power in measuring light, or horsepower in measuring the work of an engine.

Cystic Tumors. Membranelike sacks filled with fluid. These may grow from either uterus or ovaries.

Cancer. A malignant growth which destroys normal tissues. This destruction of tissue is apt to continue until death.

Fallopian Tubes. These are the tubes which convey the ova or eggs from the ovaries to the womb. Fertilization, or the union of the male sperm cell with the female ovum or egg, may take place in one of the Fallopian tubes. The fertilized ovum then passes into the womb and becomes attached to the wall.

Fibroid Tumors. Hard, fibrous masses which may grow in the uterus.

Fœtus. The term commonly applied to the child while it is developing in the womb.

Formulæ. Rules or recipes for making up things.

Involution. The shrinking of the womb after childbirth.

Menstruation. The monthly discharge of blood from the womb (or uterus).

Menopause. The cessation of menstruation, or "change of life."

Ovaries. Two glandlike organs about the shape and size of an olive. They are situated in the lower part of the abdomen, one on either side of the upper ends of the uterus. They contain the ova or eggs.

Ovum. The tiny egg from which the child develops. It is about 1/125 of an inch in diameter.

Pelvis. The name given to the body cavity in the basin formed by the hip bones, the sacrum and the pubic bone.

Perineum. The muscles between the vagina and rectum. These are frequently torn in childbirth.

Placenta. This consists of a mass of tissue, partly formed from the child and partly from the mother, which nourishes the developing child while in the uterus. It is also called the "afterbirth." It is expelled soon after the birth of the child.

Polypi. Small growths which sometimes appear on the mucous linings of cavities such as the nose or uterus.

Sterile. Anything which has been so treated with heat or with some chemical solution that all disease germs which could possibly be on it have been killed.

Sterility. Inability to bear or beget children.

Subinvolution. This is the term applied when the womb fails to return to its normal size within the usual time following childbirth.

Sperm Cell. This is the male germ cell and corresponds to the ovum in the female. It is also called the spermatazoön, and sometimes the semen or seed.

Uterus. The pear-shaped, muscular organ in which the child grows. This is commonly called the "womb."

Vagina. The elastic, muscular sack between the uterus (womb) and the outside world.

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Head up!

Colds are communicable.

The "slack-filled" can is a "slacker"!

Buy no bread but that which is wrapped.

A pound is supposed to be 16 ounces *net,* not "about 16 ounces."

He didn't do it with "his little hatchet." Carrie Nation did!

See the program for the public health institute, April 11 to 15, inclusive.

Health officers are invited to read the statement concerning the registration area for Kansas.

Where the city of the healthiest father stands,
Where the city of the best-bodied mother stands,
There the great city stands.
—*Walt Whitman.*

MORBIDITY REPORT FOR DECEMBER, 1921.

COUNTIES AND CITIES.	Tuberculosis	Typhoid and Paratyphoid	Smallpox	Diphtheria	Influenza	Scarlet Fever	Measles (morbilli)	German Measles (rubella)	Whooping Cough	Chickenpox	Mumps	Pneumonia (all forms)	Meningitis (epidemic)	Poliomyelitis (epidemic)	Other diseases (see Addenda)
THE STATE	226	27	239	959	4	842	23	5	82	418	87	99	4	6	265
Allen, except	4	0	24	21	0	5	0	0	0	1	0	3	0	2	1
Iola	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Anderson	0	0	2	1	0	4	0	0	0	0	0	0	0	0	0
Atchison, except	4	0	0	2	0	4	0	0	0	0	0	0	0	0	0
Atchison city	2	0	0	12	0	5	0	0	0	0	1	0	0	0	0
Barber	0	0	0	3	0	8	0	0	0	0	0	0	0	0	0
Barton, except	0	0	1	4	0	23	0	0	0	6	0	0	0	1	0
Great Bend	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bourbon, except	0	0	0	10	0	2	0	0	0	0	0	0	0	0	0
Fort Scott	1	1	0	32	0	3	0	0	0	0	0	0	0	0	4
Brown	1	0	3	12	0	9	0	0	0	1	0	0	0	0	0
Butler, except	12	1	3	45	0	6	1	0	2	2	0	4	0	0	42
Augusta	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
El Dorado	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chase	1	0	0	4	0	3	0	0	0	0	0	0	0	0	0
Chautauqua*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cherokee, except	4	1	4	15	0	11	0	0	0	1	0	2	0	0	2
Galena	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cheyenne	0	0	3	0	0	1	0	0	0	2	0	0	0	0	0
Clark	1	0	0	4	0	1	0	0	0	1	0	0	0	0	0
Clay	0	1	1	6	0	12	0	0	0	2	0	0	0	0	0
Cloud, except	1	0	3	3	0	20	1	0	0	7	0	3	0	0	5
Concordia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coffey	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0
Comanche	0	0	0	9	0	5	0	0	0	0	0	0	0	0	0
Cowley, except	5	0	0	19	0	20	0	0	11	12	0	2	0	0	3
Arkansas City	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Winfield	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crawford, except	5	1	1	15	0	10	0	0	0	4	0	4	0	0	0
Pittsburg	4	0	3	17	0	3	0	0	0	3	0	1	0	0	1
Decatur	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0
Dickinson	7	0	0	7	0	19	1	0	0	2	1	0	0	0	0
Doniphan	2	0	0	9	0	7	0	0	0	0	0	0	0	0	2
Douglas, except	1	0	0	1	0	0	0	0	0	3	0	0	0	0	0
Lawrence	9	0	2	5	0	12	2	1	0	10	1	1	0	0	1
Edwards	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
Elk	2	0	4	1	0	0	0	0	0	0	0	0	0	0	0
Ellis	0	0	0	6	0	4	0	0	1	3	0	0	0	0	1
Ellsworth	0	0	6	9	0	1	0	0	0	2	0	3	0	0	3
Finney	0	0	0	4	0	1	0	0	0	0	0	0	0	0	0
Ford, except	15	1	3	5	0	11	0	0	2	17	0	2	0	0	4
Dodge City	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Franklin, except	0	0	0	9	0	9	0	0	0	0	0	0	0	0	0
Ottawa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Geary, except	0	0	0	12	0	29	1	0	8	73	0	3	0	0	1
Junction City	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gove	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Graham	0	0	0	10	0	5	0	0	0	0	0	0	0	0	0
Grant	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Gray	3	0	5	3	0	6	0	0	0	32	0	0	0	0	0
Greeley	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Greenwood	1	0	1	10	0	3	0	0	3	2	0	3	0	1	0
Hamilton	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0
Harper	1	0	0	15	0	3	0	0	2	2	0	0	0	0	0
Harvey, except	1	0	0	1	0	7	0	0	0	2	0	0	0	0	0
Newton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Haskell	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0
Hodgeman*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jackson	0	0	0	2	0	9	0	0	1	3	0	0	0	0	0
Jefferson	0	0	0	6	0	11	0	0	0	0	0	2	0	0	0
Jewell	0	0	1	8	0	29	1	0	4	0	0	0	0	0	0
Johnson	1	1	0	4	0	1	0	0	0	0	0	1	0	0	1
Kearny	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Kingman	1	0	1	2	0	10	0	0	0	0	0	0	2	0	0
Kiowa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Labette, except	2	0	5	8	0	2	0	2	0	4	0	0	0	0	11
Parsons	4	0	0	10	0	10	0	0	0	0	0	1	0	0	7
Lane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Leavenw th, except	1	1	0	4	0	14	1	0	0	2	0	1	0	0	10
Leavenworth city	1	0	5	9	0	11	0	0	0	1	0	1	0	0	3

MORBIDITY REPORT FOR DECEMBER, 1921—Concluded.

COUNTIES AND CITIES.	Tuberculosis	Typhoid and Paratyphoid	Smallpox	Diphtheria	Influenza	Scarlet Fever	Measles (morbilli)	German Measles (rubella)	Whooping Cough	Chickenpox	Mumps	Pneumonia (all forms)	Meningitis (epidemic)	Poliomyelitis (epidemic)	Other diseases (see Addenda)
Lincoln	0	0	3	0	0	2	0	0	0	2	7	2	0	0	0
Linn	0	1	0	6	3	12	0	0	0	3	0	0	0	0	0
Logan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lyon, except	13	1	0	39	0	4	0	0	0	1	0	1	0	0	0
Emporia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Marion	0	0	1	8	0	13	1	0	4	2	0	1	0	0	1
Marshall	0	0	6	4	0	25	1	0	0	3	0	0	0	0	0
McPherson	5	0	0	1	0	3	0	0	0	1	2	0	0	0	0
Meade	0	0	0	0	0	4	0	0	0	1	0	0	0	0	0
Miami	1	0	0	20	0	7	0	0	0	2	0	0	0	0	0
Mitchell	4	0	1	1	0	7	0	0	0	1	0	0	0	0	0
Montgomery, except	4	1	4	15	0	3	1	0	0	3	1	0	0	0	0
Coffeyville	3	1	0	9	0	0	1	0	0	0	0	1	0	0	0
Independence	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Morris	0	0	0	13	0	17	0	0	0	5	0	0	0	0	0
Morton	0	0	1	1	0	9	0	0	0	0	0	0	0	0	0
Nemaha	1	1	0	12	0	8	0	0	0	4	0	0	0	0	0
Neosho, except	1	0	2	17	0	9	0	0	1	1	0	0	0	0	0
Chanute	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ness	0	0	0	2	0	5	0	0	0	2	0	0	0	0	0
Norton	5	2	0	0	0	11	0	0	0	1	0	0	0	0	0
Osage	0	6	0	6	0	3	0	0	0	0	0	0	0	0	0
Osborne	1	0	7	0	0	8	0	0	1	5	0	2	0	0	0
Ottawa	1	0	0	2	0	15	0	0	0	17	0	0	0	0	1
Pawnee	2	0	0	8	0	2	0	0	7	0	0	4	0	1	0
Phillips	0	0	0	0	0	16	0	0	0	0	0	0	0	0	0
Pottawatomie	0	0	0	5	0	3	0	0	0	0	0	0	0	0	0
Pratt	2	0	1	0	0	7	0	0	0	0	0	0	0	0	0
Rawlins	0	0	0	0	0	14	1	0	0	1	0	0	0	0	0
Reno, except	1	0	6	9	0	7	0	0	0	0	0	0	0	0	0
Hutchinson	3	0	74	26	0	8	2	0	0	3	0	3	0	0	6
Republic	1	0	1	9	0	10	1	0	0	0	0	3	0	0	3
Rice	1	0	0	7	0	17	0	1	0	2	1	1	0	0	0
Riley, except	0	0	0	0	0	8	0	0	0	23	0	0	0	0	1
Manhattan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rooks	0	0	5	12	0	11	0	0	0	0	0	0	0	0	0
Rush	0	0	4	2	0	3	1	0	0	1	2	0	0	1	0
Russell	0	0	0	18	0	0	0	0	0	0	0	0	2	0	0
Saline, except	0	0	1	6	0	11	0	0	0	1	0	0	0	0	0
Salina	1	0	1	6	0	2	0	0	0	2	1	0	0	0	1
Scott	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0
Sedgwick, except	0	0	0	22	0	13	0	0	3	3	0	0	0	0	0
Wichita	14	3	4	71†	0	48	3	0	21	27	1	10	0	0	33
Seward	2	0	0	4	0	3	0	0	0	1	1	0	0	0	0
Shawnee, except	12	0	0	17	0	3	0	0	0	3	0	0	0	0	1
Topeka	16	0	4	67	1	12	1	0	0	49	2	8	0	0	36
Sheridan	0	0	0	0	0	3	0	0	0	0	0	0	0	0	1
Sherman	1	0	0	0	0	2	0	0	0	0	0	0	0	0	0
Smith	1	1	1	1	0	6	0	0	0	0	0	1	0	0	0
Stafford	0	0	1	12	0	15	0	0	0	1	0	0	0	0	0
Stanton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stevens	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0
Sumner, except	15	0	0	33	0	22	0	0	0	1	64	3	0	0	16
Wellington	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Thomas	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Trego	0	0	0	2	0	3	0	0	0	0	0	0	0	0	0
Wabaunsee	2	0	12	5	0	6	0	0	0	0	0	0	0	[illegible]	[illegible]
Wallace	0	0	0	0	0	0	0	0	0	0	0	0	[illegible]	[illegible]	[illegible]
Washington	0	0	1	5	0	18	1	0	0	0	0	0	[illegible]	[illegible]	[illegible]
Wichita	0	0	0	0	0	0	0	0	0	0	0	[illegible]	[illegible]	[illegible]	[illegible]
Wilson	1	0	2	14	0	5	0	0	11	19	1	[illegible]	[illegible]	[illegible]	[illegible]
Woodson	1	0	0	10	0	3	0	0	0	0	0	[illegible]	[illegible]	[illegible]	[illegible]
Wyandotte, except	2	0	1	5	0	1	0	0	0	0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Kansas City	11	1	14	29	0	12	1	1	0	26	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Rosedale	0	0	0	0	0	0	0	0	0	0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

* Delinquent.

† Diphtheria carrier, Wichita, 7.

Other communicable diseases: Tetanus, 5; erysipelas, 1[illegible]
syphilis, 125.

Diphtheria and Thinking With the Jawbone.

By C. W. East, M. D., Superintendent, Division of Child Hygiene and Public Health Nursing.

Recently I was accosted by a very much mistaken man. He thought he had something to say, but was mistaken at the start. He thought I would agree with him, but I did not. He thought he was showing himself a kindly man. He was not.

The name of a physician had been mentioned. This man immediately spoke in terms of condemnation of the physician. I took occasion to say that I knew the physician as competent and a gentleman. Then our jawbone thinker told me that the people of a certain West End did not like Doctor So-and So "because he had let a very popular little girl die of diphtheria." On being pressed for details he said: "The doctor jammed this anti-what-you-may-call-it into her until she died."

I replied: "A little girl was sick of diphtheria, one of the most serious diseases. The doctor in his endeavor to save her life used the proper means, but was unsuccessful. Therefore, he killed her; or what he used to combat the disease killed her, which amounts to the same thing. Therefore, the people of the West End despise this doctor and you endeavor openly to discredit him.

"Look at your reasoning. In the first place, it is only hearsay, and you urge it as the truth."

That is the first mark of the jawbone thinker and should bar us from expecting any worth-while intellectual output from him.

"Then you state that an agent, which you cannot even name, killed the little girl. You assume that she was in no particular danger from the disease, and that she would not have died had she not had antitoxin. You do not know whether the doctor had a chance to give the remedy early or late in the disease. Furthermore, you are so ignorant as to state in substance that an *antipoison* will act as poison, and that the child would not have been in danger from the poison of diphtheria."

"A few days ago a large automobile sales and repair house was burned in this city. The firemen worked with up-to-date apparatus, but did not succeed in putting out the fire. Therefore, they caused the loss of the property. They "jammed" the antifire (water) into the building until it collapsed and fell. You reason in this absurd fashion in a matter much more serious than the destruction of property."

Some definitions:

Toxin means poison.
Anti-toxin means antipoison.

Diphtheria antitoxin is that which combats diphtheria toxin. When one [illegible] theria he is poisoned by the products of the diphtheria bacilli in his [illegible] as he is poisoned by the products of the poppy when he takes [illegible] ve learned that we can produce an antipoison for diphtheria [illegible] iven early enough and in sufficient quantity will successfully [illegible]

[illegible] several things in this paragraph. Antitoxin must be [illegible] ater must be put on fire early enough. And although water will put out fire, it will not restore the substance which the fire has already destroyed.

Diphtheria poison attacks especially the muscle fibers of the heart. All the antitoxin you can give will not restore these once they are destroyed. It must be given early, before destruction has taken place.

Not a modern physician in the world would be without this direct antagonist of diphtheria. So well are the reasons for its use and its effects established that the state of Illinois, through its department of public health, provides this remedy to rich and poor without cost.

But jawbone thinking has no antitoxin. It leads to much of the misery of the world. I believe that those who indulge in it are morally responsible for the fatal havoc that it plays. I wish they could be held to account.

"Brother, the next time you attempt to express yourself upon a subject affecting the weal of your neighbor reflect upon it, whether you are thinking with your brain or your jawbone."

Samson of old slew a thousand men with the jawbone ot an ass. The jawbones of the kind who sometimes wear boiled shirts have slain their millions.—*Illinois Health News.*

The State of Health of the People of Kansas, Past, Present and Future.

With the increasing knowledge of the cause and dissemination of communicable diseases, one should expect a reduction in the prevalence of such diseases and deaths therefrom. That a reduction in these diseases has actually taken place in Kansas is proven by the records on file in the office of the State Board of Health.

One of the world's greatest sanitarians said several years ago that public health was purchasable, and that within certain limitations the death rate from preventable diseases could be fixed by any community, depending upon the ways and means adopted by such community for the suppression and prevention of preventable disease.

Appropriations for public-health work, municipal, county and state, are far from being adequate, and thus the minimum prevalence of preventable disease has not yet, by any means been reached, although great progress has been made, and much more may be expected in the not distant future.

Fifteen years ago the death rate from typhoid fever in Kansas was approximately 25 per 100,000. This has gradually been reduced during the intervening years by improvement in public water supplies, by "swat the fly" campaigns, by a general betterment in sanitary conditions and by immunization with antityphoid inoculation of a considerable per cent of the population, so that the death rate for 1920 registers less than 8 per 100,000 and in 1921 slightly in excess of 8 per 100,000. This is a great saving in human life, to say nothing about the proportionate saving in the prevalence of thousands of cases that annually recover, but with impaired physical health and lowered resistance to disease in general.

In like manner, tuberculosis, too, formerly the "captain of the hosts of death," and the immediate cause of the death of 1,500 people in Kansas annually, has now been reduced to 855 for the year 1920, giving us a rate of 48.2 per 100,000 population, as against the registration-area rate of 114.2 per 100,000. Kansas has great reason to rejoice about this phenomenally low rate from tuberculosis, which can be attributed in a large measure not only to fifteen years' energetic work by the State Board of Health in public-health education and in the supervision of reported cases, but also to the energy and enthusiasm with which both local and state tuberculosis societies have, in season and out of season, worked for the care of advanced cases of tuberculosis and the early diagnosis and sanatorium treatment of incipient cases.

Other communicable diseases have, on the whole, yielded to a better supervision of quarantine measures. During the past year the state has experienced the most widely spread epidemic of diphtheria in its history, and thus the case rate for this disease has jumped from 238.9 per 100,000 population to 490.1, but it is gratifying to note that while there were over twice as many cases in 1921 as in 1920, yet the death rate has only increased 3.83 per 100,000 population. A similar condition exists concerning the prevalence of scarlet fever, the number of cases reported per 100,000 population for 1920 being 275.4; for 1921, 374; whereas the death rate only increased 0.23 per 100,000. The closing months of the present year have witnessed the prevalence of a very malignant type of smallpox on the eastern border of the state, particularly in Kansas City, Mo., where the death rate up to the present time has been approximately 33 per cent of cases reported. It was inevitable that infection from this center should be distributed to points in Kansas, which has resulted in approximately 20 deaths at various points through the eastern part of the state. Fortunately this condition has resulted in the stimulation of vaccination, and it is assumed that probably over 200,000 people have been rendered immune to smallpox by a successful vaccination, most of whom had previously never been successfully vaccinated.

When we come to certain other diseases known as "organic diseases," but which are now understood to be to a greater or less degree preventable, we find a very interesting situation. First we note a very remarkable reduction in the deaths from acute rheumatism during the past ten years, amounting to approximately 50 per cent, as the figures for the following years will indicate:

Deaths from Acute Rheumatism in Kansas.

1915	112
1916	102
1917	95
1918	67
1919	55
1920	63
1921	53

It is interesting to analyze this situation. Probably the chief cause for this remarkable reduction is the fact that it was about ten years ago that we began to suspect, which later was proven, that acute rheumatism owed its origin to what is known as "focal infection," that is, that in some distant part of the body a poisonous material was being absorbed which was carried in the blood stream and produced inflammation of the joints, known as acute rheumatism. In these latter days immediate search is made for local focal infection in every case of rheumatism, which if speedily removed usually results in the rapid recovery of the case, and thus we do not have as large a number of terminal deaths from this infection.

In the case of cancer we are unable to register very much improvement, although deaths from cancer in this state are considerably below the number in the registration area. Not knowing for certain the cause of cancer, other than the fact that there is usually some local point of irritation, we are in ignorance as to means of prevention; although we can expect a reduction in the death rate from this malignant disease from this time on, because of the growing knowledge that early diagnosis and early operation will and does save life. The death rates from this disease in Kansas for the past five years per 100,000 are as follows:

1916	72.4
1917	71.9
1918	72.8
1919	69.2
1920	72.4

The registration-area rate for 1920 was 83.4—exactly 11 points higher than the Kansas rate.

FORECAST FOR THE FUTURE.

There is every reason to hope that during the next fifteen years there will be a corresponding reduction in the death rate from preventable diseases. By that time typhoid fever will have been almost completely if not quite wiped off the map and be a memory. Smallpox could be eliminated within a year from the entire geographical area of the United States if everybody would be successfully vaccinated. There is no fact in all medicine that has been so clearly and incontestably proven as that a successful recent vaccination will protect against smallpox. In fifteen years from now tuberculosis will be reduced at east 50 per cent below its already greatly reduced mortality.

With the knowledge we have concerning the prevention and suppression of diphtheria, it remains to be seen if intelligent use shall have been made of such knowledge, that diphtheria, like typhoid fever, may be wiped off the map by the time another decade rolls around. This is entirely possible, and if it is not done, must stand as an indictment against every community tolerating its presence.

After all, the whole matter of the prevalence of preventable diseases rests with those who vote the budgets to boards of health. The statement made at the beginning of this résumé, that public health is purchasable, and that the death rate from preventable diseases, within certain limitations, can be fixed by any community, is literally and absolutely true.

S. J. Crumbine, M. D., *Secretary.*

Remove the Cause.

The canker of disease gnaws at the very root of our national strength. The sufferers are not few or insignificant. They are the bread winners for at least a third part of our population. That they have causes of disease indolently left to blight them amid their toil is surely an intolerable wrong. And to be able to redress that wrong is perhaps among the greatest opportunities for good which human institutions can afford.—*Sir John Simon.*

Report of Public Health Laboratory for January, 1922.

	January.		*December.*	
1. Complement fixation test for syphilis:				
Blood specimens from physicians:				
Positive	106		115	
Negative	347		307	
Doubtful	46		31	
Unsatisfactory	20		17	
Totals	——	519	——	470
Blood specimens from Lansing:				
Positive	20		47	
Negative	46		80	
Doubtful	10		16	
Unsatisfactory	2		2	
Totals	——	78	——	145
Spinal fluid from physicians:				
Positive	6		8	
Negative	5		14	
Doubtful	0		1	
Unsatisfactory	0		0	
Totals	——	11	——	23
Spinal fluids from Lansing:				
Positive	0		0	
Negative	1		1	
Totals	——	1	——	1
2. Globulin test—spinal fluid:				
Positive	7		14	
Negative	2		6	
Totals	——	9	——	20
3. Examination of sputum for tubercle bacilli:				
Positive	10		15	
Negative	95		66	
Unsatisfactory	4		0	
Totals	——	109	——	81
4. Examination of cultures for diphtheria bacilli:				
Positive	91		268	
Negative	594		1,116	
No growth	142		76	
Unsatisfactory	1		6	
Totals	——	828	——	1,466
5. Examination of smears for gonococci:				
From physicians:				
Positive	9		9	
Negative	44		42	
Unsatisfactory	1		3	
Totals	——	54	——	54
From Lansing:				
Positive	4		3	
Negative	57		88	
Totals	——	61	——	91
6. Examination of blood—Widal test for typhoid:				
Positive	2		3	
Negative	14		11	
Unsatisfactory	1		1	
Totals	——	17	——	15
7. Stool cultures for typhoid:				
Positive	0		0	
Negative	1		1	
Totals	——	1	——	1
8. Miscellaneous examinations:				
Pleural exudates for tuberculosis	2		..	
Urine for tuberculosis	3		..	
Spinal fluids for meningococcus	5		..	
Miscellaneous cultures	2		..	
Animal heads for rabies: Positive, 1; negative, 1; unsatisfactory, 1	3		..	
Darkfield examination for *Spirocheta pallida*	2		..	
Smear for organisms of Vincent's angina	1		..	
Feces for parasites	1		..	
Feces for tuberculosis	1		..	
Blood culture	1		..	
Miscellaneous smears	2		..	
Colloidal gold	1		..	
Examination for actinomycosis	1		..	
Totals	——	25	——	12
Grand totals		1,713		2,379

LABORATORY ACTIVITIES.

The director made a trip to Kingman, Kan., on January 24, to investigate an outbreak of cerebrospinal epidemic meningitis. The report was submitted to the secretary of the State Board of Health on January 28.

With the advice and consent of the secretary of the State Board of Health, arrangements were made with the authorities of Washburn College to offer a course in public hygiene in the second term of the school year 1921-'22. The personnel of the State Board of Health will be called upon to give one or more lectures in their respective specialties. It was made evident to the authorities of Washburn College that the giving of this course in no way set a precedent in the relations between this department and the college.

A meeting of the laboratory workers of the state was held in the supreme court chamber, statehouse, on January 27, under the auspices of the State Board of Health. There was an attendance of thirty-six. An organization was perfected, with the following officers: President, Martin Dupray, Dupray laboratories, Hutchinson; secretary, William Levin, director State Public Health Laboratory; treasurer, L. D. Bushnell, professor of bacteriology, Manhattan. The name adopted was the Kansas Laboratory Association.

One of the questions submitted for study and for action at the next meeting was some form of certification of the laboratory workers. The director fully appreciates the importance of this question and is giving it his serious consideration and study. A preliminary paper will be submitted to the secretary of the State Board of Health as soon as the director has arrived at definite conclusions.

Are You Protected?

Kansas City has an epidemic of smallpox that is killing 34.4 per cent of those attacked. A mail clerk on the Santa Fe railroad, running between Kansas City and Chicago, contracted smallpox in Kansas City a few weeks ago. He came to his home in Chicago and died of the disease a few days later. He never had been vaccinated. His wife is in the isolation hospital now with smallpox. She never had been vaccinated. A fine young lady, eighteen years old, came from Kansas City to visit friends at La Grange, Ill., a couple of weeks ago. She came down with smallpox and died of the disease a few days later. She never had been vaccinated.

A wealthy business man, forty-two years of age, whose home is New York city, visited Kansas City on business November 17. He came to Chicago, became sick with smallpox in a prominent Michigan avenue hotel, November 30, died in the isolation hospital December 12, and was cremated the same day. He had never been vaccinated.

Here were three persons who contracted smallpox in Kansas City, who suffered and died from the most loathsome and repulsive disease known, who could be well and happy to-day if they had been vaccinated.

The above brief recital of facts should serve to call attention to two very important things. First, that smallpox of the type now prevalent in certain sections of the country is a most dangerous disease. And second, that no one need have it; or putting it still more strongly, no one can have it who has been properly vaccinated. So don't be frightened by the bugaboo that vaccination is dangerous, for it isn't. But smallpox is dangerous and the type now prevailing is deadly so.

A little sore on your arm is much to be preferred to a zinc-lined box and a hole in the ground in one of the city's cemeteries.—*Bulletin of Chicago School of Sanitary Instruction.*

Analyses of Some Commercial Gelatines.

H. Robert DeRose, K. S. A. C., Manhattan, Kan.

The purpose of this work was to determine the purity of gelatines used by the ice-cream manufacturers of this state and compare them with a product of known composition.

The product used for food is prepared from good, clean bones, calves' feet, and many other animal parts. These parts are soaked for several days in successive quantities of cold distilled water to remove salts and soluble substances. It is then warmed until it has dissolved in the water it has absorbed, and then filtered in a hot solution of alcohol (90 per cent). This precipitates the gelatine in stringy masses. It is then redissolved in hot distilled water and reprecipitated by alcohol.

Gelatine is usually regarded as an albuminoid, but does not strictly meet with the requirements of an albuminoid. It is an artificial derivative of collagen, and is formed by boiling it with steam under pressure.

Gelatine is insoluble in cold water, but swells and softens when immersed in it, gradually taking up from five to ten times its own weight of water; soluble in hot water and acetic acid; insoluble in alcohol and ether. When a hot one per cent solution of gelatine cools it should form a jelly. Prolonged heating destroys the gelatinizing power of gelatine.

Commercial gelatines are bleached with sulphurous acid. For this reason sulphites are found in gelatine, sometimes in large amounts.

If the hot aqueous solution is very dilute it remains unchanged upon cooling, but if made slightly stronger it forms a viscous substance. It was found that if a solution contained more than one per cent gelatine the consistency of the jelly was increased, but this depends upon the purity of the gelatine.

Solutions of gelatine are not diffusible. A warm solution of gelatine in water may be classed as a hydrosol. It can hardly be said that the solid solution is a true gel, but it is a solid hydrosol. (Proctor.)

A pure gelatine is a more or less transparent substance of vitreous appearance, and is brittle when dry. It should be free from color, taste and smell.

Gelatine when acted upon by picric acid gives a yellow precipitate. This method is used for the detection of it in ice cream.

In boiling water good gelatine dissolves readily, yielding a solution almost neutral to litmus.

Gelatine is used in ice cream as a binder of fluid mix and to prevent crystallization; in other words, it is used to make the product smoother and keep it smooth for days in the hardening room. Gelatine is not used for its viscosity effect, because the ageing of the mix produces this better than any amount of gelatine. To be sure, an excess of gelatine will produce a greater viscosity, but at the same time it makes the mix sticky and gummy. Low-grade gelatines will also do this. An impure gelatine will produce stickiness in ice cream, which is undesirable.

It has been found that the less gelatine used the better the product, if it will do the proper binding and prevent crystallization.

The gums used are great viscosity agents, but if used in a very small excess they produce stickiness and sliminess, which are undesirable and lowers the grade of ice cream.

Gelatine is used by many in the making of other articles for the market. In candy work the principal use is in making marshmallows. The biscuit and cracker trade use gelatine both for filling and icing work.

Gelatine should not contain more than 15 per cent nitrogen nor more than 2 per cent ash. Copper and zinc (indicating glue stock preserved with zinc salts) are impurities.

A simple method of testing the purity of gelatine is to dissolve a small amount (one gram) in 50 cc or 2 ounces of hot water and boil one minute. If a putrid odor is present it shows that the gelatine is made of decomposed animal parts. A good pure gelatine does not have this odor when treated this way.

It was found that the samples tested and herein reported were within the United States standards for nitrogen and ash, though many contained more sulphur dioxide, arsenic and zinc than they should according to these standards. Gelatines showing much zinc indicate a glue stock. It will be seen that these samples contained a great deal of zinc in some cases.

The United States standard for gelatine is as follows:

Copper, not over 30 parts per million.
Zinc, not over 100 parts per million.
Arsenous oxide, not over 1.4 parts per million.
Sulphur dioxide, not over 350 parts per million.

Analyses of pure gelatine:

Copper, below 5 parts per million.
Arsenous oxide, 0.6 parts per million.
Zinc, below 10 parts per million.
Sulphur dioxide, none.

The following are the analyses of 21 gelatine samples received at this laboratory:

No.	Used by—	Manufacturer or Jobber.	Nitrogen.	Ash.	Sulphur dioxide, parts per million.	Copper.	Zinc, parts per million.	Arsenic, parts per million.	Acid test.
60848	Olathe Creamery Co., Olathe	S. W. Noggle Supply Co., Kansas City, Mo.	15.18	1.46	211.31	Trace.	130.34	3.0	Acid.
60849	Okeh Creamery, Manhattan	Wilson & Co., Kansas City, Kan.	15.38	1.00	142.00	0	1044.2	Trace.	Acid.
60850	Okeh Creamery, Manhattan	The Boerner-Fry Co., Iowa City, Iowa	14.74	1.95	900.04	0	4096.8	2.0	Acid.
60852	Junction City Produce Co., Junction City	United Chemical and Organic Co., Chicago, Ill.	15.42	1.14	93.3	....	0.0	5.0	———
60855	Bell Springs Creamery, Salina	Consumers' Gelatine Co., St. Louis, Mo.	14.84	1.47	0.0	....	50.37	3.0	———
60859	Silver Springs Creamery, Salina	St. Louis Gelatine Co., St. Louis, Mo.	15.36	1.14	614.0	....	36.20	0	———
60860	Candaland, Salina	W. K. John, Chicago, Ill.	14.22	1.74	103.3	....	27.01	1.0	———
60861	D. A. Grammar, Salina	Consumers' Gelatine Co., St. Louis, Mo.	15.08	1.40	109.7	....	50.32	5.0	———
93777	Theo. Pappas, Parsons	St. Louis Gelatine Co., St. Louis, Mo.	15.32	2.00	44.39	0	*.......	0.2	Acid.
93778	Geo. Pappas, Parsons	....	15.38	0.76	145.94	Trace.	522.40	0.2	Alkaline.
93779	Currigan Creamery Co., Parsons	Boerner-Fry Co., Iowa City, Iowa	15.04	1.20	274.4	Trace.	393.61	0.5	Neutral.
93780	Currigan Creamery Co., Parsons	Consumers' Gelatine Co., St. Louis, Mo.	14.64	0.86	42.03	0	437.7	2.5	Acid.
93817	Sanitary Ice Cream Co., Independence	Consumers' Gelatine Co., St. Louis, Mo.	14.84	1.20	63.22	0	4279.5	1.5	Acid.
93820	Boomis Bros., Independence	James A. Harper Supply Co., Kansas City, Mo.	14.74	0.75	....	Trace.	*.......	*.......	Neutral.
93821	Mikes & Catrakis, Wichita	Hobicht & Co., Chicago, Ill.	15.31	1.07	159.17	0	509.0	1.5	Acid.
93824	Steffens-Brecht Ice & Ice Cream Co., Wichita	Wilson & Co., Kansas City, Kan.	15.28	1.15	67.10	0	397.6	4.0	Acid.
93825	E. D. Cero, Wichita	Consumers' Gelatine Co., St. Louis, Mo.	15.04	1.30	178.38	0	*.......	*.......	Acid.
93826	Wichita Candy Kitchen, Wichita	Consumers' Glue Co., St. Louis, Mo.	14.04	0.97	*.......	Trace.	259.95	*.......	Acid.
93827	Zipp Butter and Ice Cream Co., Wichita	St. Louis Gelatine Co., St. Louis, Mo.	15.20	0.71	454.96	0	*.......	7.0	Neutral.
93828	Snyder Ice Cream Co., Wichita	St. Louis Gelatine Co., St. Louis, Mo.	14.90	1.28	392.40	Trace.	328.3	2.5	Neutral.
93831	Sillas Candy Kitchen, Wichita	Hobicht & Co., Chicago, Ill.	15.00	0.90	96.00	0	1847.7	2.5	Acid.

*Not enough sample.

Report of Public Health Laboratory for December, 1921.

JANUARY 4, 1922.

	December.		*November.*	
1. Complement fixation test for syphilis:				
Blood specimens from physicians:				
Positive	115		75	
Negative	307		278	
Doubtful	31		34	
Unsatisfactory	17		18	
Totals		470		405
Blood specimens from Lansing:				
Positive	47		39	
Negative	80		206	
Doubtful	16		21	
Unsatisfactory	2		2	
Totals		145		268
Spinal fluids from physicians:				
Positive	8		6	
Negative	14		7	
Doubtful	1		0	
Unsatisfactory	0		2	
Totals		23		15
Spinal fluids from Lansing:				
Positive	0		0	
Negative	1		1	
Doubtful	0		0	
Unsatisfactory	0		0	
Totals		1		1
2. Globulin test—spinal fluids:				
Positive	14		9	
Negative	6		4	
Totals		20		13
3. Examination of sputum for tubercle bacilli:				
Positive	15		22	
Negative	66		86	
Totals		81		108
4. Examination of cultures for diphtheria bacilli:				
Positive	268		598	
Negative	1,116		3,022	
No growth	76		302	
Unsatisfactory	6		0	
Totals		1,466		3,922
5. Examination of smears for gonococci:				
From physicians:				
Positive	9		5	
Negative	42		20	
Unsatisfactory	3		2	
Totals		54		27
From Lansing:				
Positive	3		4	
Negative	88		241	
Totals		91		245
6. Examination of blood—Widal test for typhoid:				
Positive	3		5	
Negative	11		19	
Unsatisfactory	1		1	
Totals		15		25
7. Stool cultures for typhoid:				
Negative	1		2	
Unsatisfactory	0		1	
Totals		1		3
8. Miscellaneous examinations:				
Urine for tuberculosis	2		....	
Stool for occult blood	1		....	
Dark field examination	1		....	
Blood smear for malaria	1		....	
Pus for bacteria	1		....	
Pleural exudate for tuberculosis:				
Positive	1		....	
Negative	1		....	
Smears for organisms of Vincent's Angina	2		....	
Urine for bacteria	1		....	
Blood smear for differential	1		....	
Totals		12		11
Totals for month		2,379		5,043

Program

Of the United States Public Health Service Institute Combined with the Kansas Annual School for Health Officers and Public Health Nurses.

KANSAS CITY, KAN., APRIL 10-15, INCLUSIVE.

(Sessions will be held in the rooms of the Chamber of Commerce, No. 727 Minnesota avenue.)

MONDAY.

8:30 a. m. Registration at Chamber of Commerce.

10:00 a. m. Syphilis. *Dr. M. F. Engman,* St. Louis, Mo., Clinical Professor of Dermatology, Washington University Medical School.

9:00 a. m. Protective Social Work. *C. A. Bantleon,* Interdepartmental Social Hygiene Board.

11:00 a. m. Influenza. *Dr. Frank G. Pedley,* Epidemiologist, Kansas State Board of Health.
Lunch.

1:30 p. m. Measles and Whooping Cough. *Dr. John J. Sippy,* Epidemiologist, Montana State Board of Health.

2:30 p. m. The Early Diagnosis of Tuberculosis. *Dr. C. S. Kenney,* Superintendent State Tuberculosis Sanitorium.

3:30 p. m. Syphilis. *Doctor Engman.*

4:30 p. m. Round Table (30 minutes). *Dr. S. J. Crumbine,* Secretary Kansas State Board of Health.

TUESDAY.

9:00 a. m. Syphilis. *Doctor Engman.*

10:00 a. m. Child Hygiene: General Field. *Dr. Florence Brown Sherbon,* Director, Bureau Child Research, University of Kansas, Lawrence.

11:00 a. m. Typhoid Fever. *Doctor Sippy.*
Lunch.

1:30 p. m. Antityphoid Vaccination. *Dr. Geo. W. McCoy,* Director Hygienic Laboratory, U. S. P. H. S., Washington, D. C.

2:30 p. m. The Principles of Public Health Education. *Dr. Frederick A. Green,* Secretary, Council on Public Health and Instruction, A. M. A.

3:30 p. m. Syphilis. *Doctor Engman.*

4:30 p. m. Round Table (30 minutes). Subject: Syphilis. *Doctor Engman.*

WEDNESDAY.

9:00 a. m. Gonorrhœa in the Male. *Dr. H. E. McCarthy,* Director Venereal Disease Clinic, Kansas City, Kan.

10:00 a. m. Child Hygiene: Prenatal. *Doctor Sherbon.*

11:00 a. m. Laboratory Helps in Diagnosis. *Dr. Geo. W. McCoy.*
Lunch.

1:30 p. m. Gonorrhœa in the Female. *Dr. Nels F. Ockerblad,* Assistant Professor of Genito-urinary Surgery, School of Medicine, University of Kansas.

2:30 p. m. The Physical Examination of Well Persons. *Dr. Ralph Major,* Professor of Medicine, School of Medicine, Kansas University.

3:30 p. m. The Duties and Opportunities of the County Health Officer. *Doctor Sippy.*

4:30 p. m. The Powers and Duties of the Health Officer. *Dr. Frederick R. Green.*

THURSDAY.

9:00 a. m. The Development and Present Status of Medical Social Work. *Dr. Rachelle S. Yarros,* U. S. P. H. S., Washington, D. C.

10:00 a. m. The Prevention of Diseases of the Heart and Arteries. *Dr. Peter Bohan,* Professor of Clinical Medicines, School of Medicine, University of Kansas.

11:00 a. m. Child Hygiene: Hygiene of Infancy. *Dr. Florence Brown Sherbon.*
Lunch.

1:30 p. m. Essentials of a Successful Clinic. *Dr. Roul Sylvester,* Des Moines, Iowa.

2:30 p. m. The Function of the Public-health Nurse. *Doctor Yarros.*

3:30 p. m. Problems Peculiar to the City Health Officer and the County Health Officer. *Doctor Sippy.*

4:30 p. m. Round Table (30 minutes). *Doctor Crumbine.*

FRIDAY.

9:00 a. m. The Health Center. *Dr. Sylvester.*
10:00 a. m. The Full-time Health Organization. *Dr. A. J. Warren,* Director County Health Work, International Health Board.
11:00 a. m. Child Hygiene: School Hygiene. *Doctor Sherbon.*
Lunch.
1:00 p. m. The Psychology of the Delinquent. *Doctor Yarros.*
2:30 p. m. Diphtheria. *Doctor Sippy.*
3:30 p. m. Mental Health and the Newspaper. *Prof. Nelson A. Crawford,* Director School of Journalism, State Agricultural College, Manhattan.
4:30 p. m. Round Table (30 minutes). *Dr. Carter F. Enloe,* Secretary Missouri State Board of Health, Jefferson City, Mo.

SATURDAY.

9:00 a. m. Community Program. *Doctor Yarros.*
10.00 a. m. Fly and Mosquito Control. *Doctor Sippy.*
11:00 a. m. The Physiological and Hygienic Aspect of Physical Education and Play. *Doctor Sherbon.*
Lunch.
1:30 p. m. Mental Disease in Relation to Public Health. *Dr. Karl A. Menninger,* Topeka, Kan.
2:30 p. m. Round Table. *Doctor Crumbine.*

EVENING PUBLIC LECTURES.

The Social and Economic Rehabilitation of the Delinquent. *Doctor Yarros.*
Present-day Problems of Applied Medicine. *Doctor F. A. Green,* Secretary, Council on Public Health Education and Instruction, A. M. A.
The Nation's Greatest Defensive and Economic Asset—Health. *Dr. J. T. Axtell,* Member Kansas State Board of Health, Newton, Kan.

EVENING SECTION MEETINGS.

The Annual Meeting of the Kansas Public Health Officials.
The Annual Meeting of the Kansas Public Health Nurses.
The Annual Meeting of the Kansas Laboratory Association.

A Psychic Problem.

Two powerful colored stevedores, who had some sort of falling out, were engaged in unloading a vessel at a St. Louis dock. Uncomplimentary remarks and warnings of intended violence were exchanged whenever the two passed each other with their trucks.

"You jest keep on pesticatin' around wid me," declared one of the men, "an' you is gwine be able to settle a mighty big question for de sciumtific folks."

"What question dat?" asked the other.

"Kin the dead speak?"—*Harpers.*

A Matter of Diet.

A negro employed at one of the movie studios in Los Angeles was drafted by a director to do a novel comedy scene with a lion.

"You get into this bed," ordered the director, "and we'll bring the lion in and put him in bed with you. It will be a scream."

"Put a lion in bed with me!" yelled the negro. "No, sah! Not a-tall! I quits right here and now."

"But," protested the director, "this lion won't hurt you. This lion was brought up on milk."

"So was I brung up on milk," wailed the negro, "but I eats meat now."

How Did You Die?

Did you tackle the trouble that came your way
With a resolute heart and cheerful,
Or hide your face from the light of day
With a craven soul and fearful?

Oh, a trouble's a ton or a trouble's an ounce,
A trouble's what you make it;
It isn't the fact that you're hurt that counts,
But only how did you take it?

You are stricken to earth. Well, what of that?
Come up with a smiling face.
It's nothing against you to fall down flat,
But to lie there, that's disgrace.

The harder you're thrown, the harder you bounce;
Be proud of your blackened eye!
It isn't the fact that you're licked that counts,
But how did you fight, and why?

And if you be done to the death, what then?
If you battled the best you could,
And you fought your fight in the world of men,
The Maker will call it good.

Death comes with a crawl or it comes with a pounce,
And whether he is slow or spry,
It isn't the fact that you're dead that counts,
But only how did you die.
—*Edmund Vance Cook.*

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OF THE
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S. J. CRUMBINE, M.D., Editor.

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Slow up!

Is it safe?

To live well and to a ripe old age is the inherent right of everyone.

Public safety is too often sacrificed to commercialism or ignorance.

The best dollar any county spends is that invested in a full-time county health department.

It was money spent in sanitation that built the Panama canal! Wasn't that the best investment Uncle Sam ever made?

One can form a reasonably good estimate of the common sense and foresight of a community by measuring its *per capita* investment in public health.

Deaths from communicable diseases have been reduced so greatly the past ten years by public-health activities as to be the equivalent of prolonging human life on an average of *four* years.

Remember the Public Health Institute at Kansas City, Kan., April 10 to 15. Plan to attend.

MORBIDITY REPORT FOR JANUARY, 1922.

COUNTIES AND CITIES.	Tuberculosis	Typhoid and Paratyphoid	Smallpox	Diphtheria	Influenza	Scarlet Fever	Measles (morbilli)	German Measles (rubella)	Whooping Cough	Chickenpox	Mumps	Pneumonia (all forms)	Meningitis (epidemic)	Poliomyelitis (epidemic)	Other diseases (see Addenda)
THE STATE	193	16	253	644	638	826	28	10	49	553	255	352	4	4	336
Allen	0	0	13	9	2	12	0	0	2	1	0	1	0	0	0
Anderson	0	0	2	0	0	6	0	0	0	0	0	0	0	0	0
Atchison, except	1	0	0	2	0	2	0	0	0	0	0	0	0	0	0
Atchison city	0	0	0	8	0	7	0	0	0	0	0	0	0	0	0
Barber	0	0	0	2	0	11	0	0	0	1	0	0	0	0	0
Barton	1	0	4	1	0	5	0	0	0	1	16	2	0	0	0
Bourbon, except	0	1	0	11	0	2	0	0	1	0	0	0	0	0	0
Fort Scott	4	0	1	18	0	3	0	0	0	0	0	0	0	0	11
Brown	1	0	0	15	0	18	0	0	1	0	0	2	0	1	2
Butler	2	0	0	11	0	10	0	0	1	1	0	23	0	0	19
Chase	2	0	0	2	0	3	1	4	4	0	0	0	0	0	0
Chautauqua*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cherokee	0	0	3	6	11	6	0	0	0	7	0	13	0	0	3
Cheyenne	2	1	2	0	0	8	0	0	0	4	0	0	0	0	0
Clark	0	0	0	3	0	4	0	0	0	0	0	0	0	0	0
Clay	2	0	2	4	0	3	0	0	0	0	0	0	0	0	0
Cloud	0	0	2	4	35	15	1	0	1	11	0	7	0	0	0
Coffey	1	0	0	7	0	1	0	0	0	1	0	0	0	0	0
Comanche	0	0	0	6	0	4	0	0	0	0	0	0	0	0	0
Cowley	7	1	0	13	1	12	0	0	6	4	0	4	0	1	2
Crawford	3	0	0	16	4	14	1	0	0	3	0	6	0	0	1
Pittsburg	1	2	4	14	0	4	0	0	0	4	0	1	0	0	1
Decatur	0	0	0	0	0	4	0	0	0	2	0	0	0	0	0
Dickinson	2	0	2	5	0	9	0	1	0	4	0	3	0	0	1
Doniphan	0	0	0	5	0	10	0	0	0	8	0	1	0	0	2
Douglas, except	3	0	0	5	10	3	0	0	0	3	0	3	0	0	0
Lawrence	5	0	1	6	6	4	0	0	0	4	0	1	0	0	15
Edwards	0	0	0	0	0	4	0	0	0	0	0	2	0	0	0
Elk	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0
Ellis	1	0	0	5	4	0	0	0	1	1	0	2	0	0	1
Ellsworth	0	0	0	5	0	1	1	0	0	3	0	6	0	0	2
Finney	0	0	0	4	0	3	0	0	0	0	7	0	0	0	0
Ford	1	0	4	5	0	7	0	2	1	39	0	2	0	0	6
Franklin	2	0	0	11	0	7	0	0	0	0	0	1	0	0	0
Geary	0	0	0	4	0	19	1	0	4	40	0	2	0	0	0
Gove	1	0	0	2	2	1	0	0	0	0	0	0	0	0	0
Graham	0	0	0	8	0	3	0	0	0	0	0	0	0	0	0
Grant	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gray	0	0	1	2	0	7	0	0	0	15	2	1	0	0	0
Greeley	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Greenwood	1	1	0	4	3	1	0	0	0	1	0	8	0	0	0
Hamilton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Harper	2	0	0	14	0	6	1	0	0	6	0	5	0	0	0
Harvey	2	0	0	4	0	9	0	0	0	1	0	0	0	0	0
Haskell	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Hodgeman	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0
Jackson	0	1	0	0	8	8	1	0	0	2	0	0	0	0	0
Jefferson	1	0	0	8	49	15	1	0	0	0	0	1	0	0	0
Jewell	0	0	0	5	4	36	1	0	2	2	0	0	0	0	0
Johnson	2	1	0	3	0	4	0	0	0	0	0	0	0	0	0
Kearny	0	0	0	0	2	11	0	0	0	0	1	0	0	0	0
Kingman	0	0	0	0	0	8	0	0	0	0	0	4	2	0	1
Kiowa	2	0	0	1	0	6	0	0	0	1	1	0	0	0	0
Labette, except	5	0	41	37	0	4	0	0	0	1	0	3	0	0	12
Parsons	4	0	3	4	0	6	0	0	0	0	0	1	0	0	6
Lane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Leavenw'th, except	1	1	4	4	1	0	1	0	0	1	0	0	0	0	2
Leavenworth city	1	1	0	19	0	8	0	0	0	1	0	4	0	0	7
Lincoln	1	0	0	0	79	5	0	0	0	14	1	4	0	0	0
Linn	3	0	0	4	4	12	0	0	0	1	0	6	0	0	1
Logan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lyon	3	0	0	10	0	3	0	0	0	8	0	2	0	0	0
Marion	5	0	0	4	2	22	0	0	1	3	0	7	0	0	2
Marshall	1	0	3	12	0	17	0	0	0	7	0	1	0	0	2
McPherson	0	0	0	2	0	8	0	0	0	4	0	2	0	0	0
Meade	1	0	0	0	0	4	0	0	0	0	0	0	0	0	0

MORBIDITY REPORT FOR JANUARY, 1922—Concluded.

COUNTIES AND CITIES.	Tuberculosis	Typhoid and Paratyphoid	Smallpox	Diphtheria	Influenza	Scarlet Fever	Measles (morbilli)	German Measles (rubella)	Whooping Cough	Chickenpox	Mumps	Pneumonia (all forms)	Meningitis (epidemic)	Poliomyelitis (epidemic)	Other diseases (see Addenda)
Miami	4	0	0	8	0	9	0	0	0	0	0	1	1	0	0
Mitchell	1	0	4	0	0	7	0	0	0	0	0	0	0	0	0
Montgomery, except	1	0	0	8	3	7	0	0	0	6	0	6	0	0	3
Coffeyville	9	0	0	5	0	0	2	0	0	0	1	2	0	0	2
Morris	0	0	2	5	0	19	0	0	0	0	0	3	0	0	0
Morton	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0
Nemaha	1	0	0	1	0	6	0	0	0	0	0	0	0	0	1
Neosho	1	0	1	0	0	4	0	0	0	5	0	3	0	0	2
Ness	0	0	0	0	0	3	0	0	0	1	0	3	0	0	0
Norton	0	0	1	0	0	6	1	0	0	2	0	4	0	0	2
Osage	3	0	4	0	10	7	0	0	0	0	0	2	0	0	0
Osborne	1	0	7	0	4	16	1	0	1	11	0	0	0	0	0
Ottawa	0	0	0	3	36	4	1	0	0	22	0	0	0	0	0
Pawnee	0	2	3	3	0	3	1	0	1	0	0	0	0	0	1
Phillips	1	0	4	0	0	15	0	0	0	0	0	1	0	0	0
Pottawatomie	2	0	0	0	14	1	0	0	0	0	0	0	0	0	0
Pratt	0	0	1	6	1	6	0	0	0	0	0	0	0	0	0
Rawlins	0	0	0	0	2	8	0	1	0	0	0	2	0	0	0
Reno, except	1	0	16	22	0	13	0	0	0	1	0	1	0	1	1
Hutchinson	3	0	54	11	0	9	0	0	0	1	1	5	0	0	1
Republic	5	0	1	5	0	3	0	0	0	2	0	3	0	0	2
Rice	0	0	0	8	12	14	0	0	0	0	0	10	0	0	0
Riley	1	1	0	0	0	4	1	0	0	8	1	1	0	0	2
Rooks	0	0	0	6	1	2	0	0	0	0	0	0	0	0	0
Rush	0	0	0	0	0	6	2	0	0	8	3	0	0	0	0
Russell	0	0	6	18	0	1	0	1	0	25	0	0	0	0	0
Saline, except	0	0	0	3	0	8	0	0	0	2	0	0	0	0	0
Salina	0	0	0	6	3	7	0	0	0	11	1	0	1	0	2
Scott	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0
Sedgwick, except	0	0	0	7	0	14	1	0	0	2	0	0	0	1	0
Wichita	15	1	3	36†	1	49	3	0	10	68	1	31	0	0	60
Seward	0	0	1	1	0	1	0	0	0	4	0	0	0	0	0
Shawnee, except	2	0	0	7	58	3	0	0	0	6	0	4	0	0	4
Topeka	14	0	3	45	95	15	1	1	4	74	1	58	0	0	38
Sheridan	0	0	0	2	18	7	1	0	0	1	0	3	0	0	0
Sherman	0	0	0	3	0	1	0	0	0	0	0	0	0	0	0
Smith	1	0	0	0	0	9	0	0	0	1	0	1	0	0	0
Stafford	1	0	1	1	1	4	0	0	0	0	4	0	0	0	1
Stanton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stevens	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0
Sumner	4	0	3	17	63	30	1	0	0	2	212	25	0	0	1
Thomas	0	0	0	0	0	6	0	0	0	0	0	1	0	0	0
Trego	0	0	1	1	11	13	0	0	0	0	0	1	0	0	0
Wabaunsee	0	1	1	1	57	0	0	0	0	0	0	0	0	0	0
Wallace	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Washington	0	0	0	6	9	16	0	0	0	3	0	0	0	0	0
Wichita	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wilson	17	0	2	8	0	4	0	0	2	24	0	10	0	0	0
Woodson	0	0	0	1	4	9	0	0	5	0	0	2	0	0	0
Wyandotte, except	2	0	1	1	6	6	0	0	0	0	0	1	0	0	0
Kansas City	26	1	33	33	2	17	2	0	1	51	2	37	0	0	57
Rosedale	0	0	0	0	0	0	0	0	0	0	0	0	0		57

* Delinquent.

† Diphtheria carriers, Wichita, 2.

Other communicable diseases: Erysipelas, 22; cancer, 23; trachoma, 1; gonorrhœa, 146; syphilis, 141; chancroid, 3.

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A Lesson in Values: A True Story.

Once upon a time—indeed, not many months ago—an aroused people assembled in peaceful conclave and registered their will in a manner not soon to be forgotten by those who witnessed the spectacle.

About two p. m. on this memorable day the court room in the county court house was crowded, fully 500 people being present. Farmers and farmers' wives had come in from every section of the county. The commissioners, Mr. A, Mr. B and Mr. C, were clearly surprised. Mr. B had repeatedly voiced his opposition to the health department. On this day he demonstrated the value of his judgment by grossly misinterpreting the sentiment of the crowd assembled. He was certain that they were all of the opposition and had gathered to voice their protest against the expenditure of funds for the county health department. He apparently thought he would make a "master stroke" at the very beginning and win the admiration of the crowd. He accordingly spoke as follows:

"I'm against this proposition and I can't be changed. It's no use for anybody to say a thing, for I won't change my mind, and I voice the opinion of all in my district."

Here he was greeted with hisses, and the shock restrained him from further speech. Immediately Mr. D, a farmer, arose and told the audience that he was from Mr. B's district, and that Mr. B did not express his sentiment, because he was for the health department. He further stated that he was the largest individual taxpayer in the county, and that in addition to his taxes he was willing, if necessary, to contribute $600 toward the maintenance of the department. When he had concluded another farmer from Mr. B's district arose and expressed himself favorably, and then another, and another, until seven of the most prominent farmers in Mr. B's district had done likewise. These were followed by other men and women from other sections of the county, expressing their approval of the department. Mr. B had in the meantime become angry and surly.

A country preacher arose and during the course of his remarks asked Mr. B: "Your assessed valuation is $10,000; on this valuation you will have to contribute in taxes for the health department 90 cents. Wouldn't you pay 90 cents to have your children protected against contagious diseases?"

Mr. B replied with a surly "No," and was jeered by the audience.

The preacher then asked him, "Would you pay 90 cents to have your hogs protected against disease?" to which Mr. B refused to reply.

The preacher then turned to the audience and explained to them that only the week before Mr. B had had all of his hogs vaccinated against hog cholera, for which he paid the sum of $25. The tension of the meeting was elevated by this thrust almost to the explosive point. Here the opposition showed poor generalship by attempting at this particular moment a defense by presenting the petition of those opposed to the department, whereupon a man from the audience arose and exclaimed to the speaker: "I signed that petition because you lied. Take my name off." A number of others also had their names removed because the circulator had misrepresented the facts of cost to them, the truth regarding the cost of the department having been brought out previously in the meeting.

The Rotary Club, Commercial Club, Chamber of Commerce and the Booster's Club petitioned for the appropriation. The meeting lasted from 2 p.m to 4:30 p.m., and during the two hours of discussion the only argument advanced against the health department was the question of cost. At 4:30 the commissioners went into executive session, and the meeting was soon brought to a close by Mr. B introducing the motion, which was unanimously carried, to appropriate the necessary funds for the continuation of the department for the year 1922.

It is believed the question has been fought out in this county for good. People came with erroneous ideas and learned the truth. County commissioners in office, and future ones not yet elected, saw the will of the people manifest itself in a manner that no man dare oppose, and its memory will linger.

The Public Health Institute.

The annual School for Health Officers and Public Health Nurses will be merged this year into the Public Health Institute, held under the joint auspices of the United States Public Health Service and the Kansas State Board of Health. Sessions will be held in the rooms of the Chamber of Commerce, 727 Minnesota avenue, Kansas City, Kan., the week of April 10 to 15, inclusive.

The staff of instructors includes some of the most noted sanitarians, specialists and social workers in the United States, and insure a veritable intellectual feast for those who attend.

The district which this institute will serve includes the states of Kansas, Missouri, Iowa, Nebraska, Oklahoma and Arkansas and insures a large attendance of physicians, health officers, nurses and social workers.

Hotel headquarters are at the Grund, Kansas City, Kan. The Chamber of Commerce will have a list of rooms at reasonable rates that may be reserved upon request. Those who are wise will make their reservations early.

Lay Healing.

This is a legitimate field for lay practice, directly within the province of the Christian church and its ordained ministry, but not to be entrusted for a fee to the ignorant, who sit stolidly by a passing life repeating false assurances by rote.

We must learn to minister to a mind diseased; not alone to alienated faculties, but also to sensitized emotions and outraged affections.

Ministers of religion and ministers of health must jointly associate the beneficence of faith with the beatitudes of works, that the whole man may be conserved, and their professions saved also.

The joining of interest, through common channels, by those who would guard public morals, assure public health, and rehabilitate the poor, is the most inviting question of the moment and logically falls to medical men, who should enlist with them the ordained ministry for this world's work.—*Hubert Work.*

Kansas Clinics for Venereal Disease Control.

The following admissions to the Venereal Disease Clinics by months for 1921 is herewith submitted for the information of all concerned.

Clinic.		January.		Feb.		March.		April.		May.		June.		July.		August.		Sept.		October.		Nov.		Dec.		Totals.	
Sex		F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.
Wichita	G.	21	13	12	5	16	6	6	3	2	1	19	3	2	0	4	0	5	0	6	0	18	0	11	0	122	31
	S.	5	11	4	5	8	10	4	5	4	3	3	8	1	7	3	2	6	1	5	4	8	5	8	4	59	65
Topeka	G.	1	4	1	3	3	8	1	3	2	2	5	4	2	1	3	4	4	2	4	2	3	3	1	1	30	37
	S.	1	0	3	3	1	4	5	7	0	0	0	4	3	2	1	2	1	2	1	3	1	1	2	3	19	31
Rosedale	G.	0	4	0	2	0	5	0	3	0	7	2	4	1	8	0	5	1	7	1	11	2	9	1	8	8	73
	S.	26	51	7	20	12	26	0	21	6	23	17	39	34	39	22	28	18	33	23	24	10	23	9	21	193	348
Kansas City	G.	0	3	0	0	0	2	0	2	1	2	1	1	4	10	0	0	2	3	0	0	0	1	1	1	9	25
	S.	0	2	0	4	1	3	1	9	2	4	3	3	1	6	0	0	2	1	0	0	0	6	2	4	12	42
El Dorado	G.	8	10	7	5	8	7	8	6	9	8	6	5	8	0	5	6	10	9	12	5	12	5	9	7	102	73
	S.	5	7	5	6	6	8	5	6	6	10	2	6	1	5	2	5	4	5	3	7	3	7	4	4	46	76
Lawrence	G.	0	1	0	0	0	0	0	0	0	0	0	4	0	0	1	0	0	0	0	1	2	0	0	0	3	6
	S.	0	2	0	1	0	1	1	0	0	1	0	0	1	1	1	0	1	0	0	0	1	0	0	0	5	6
Florence	G.	0	2	1	3	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	8
	S.	0	3	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Junction City	G.	1	0	0	0	1	1	0	0	0	0	8	1	1	1	1	1	0	0	0	0	1	0	0	0	13	4
	S.	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Lansing	G.	11	11	6	4	16	7	18	5	2	7	32	14	23	14	14	7	13	0	11	4	18	2	5	3	169	18
	S.	12	10	12	10	9	10	17	16	9	8	10	7	9	12	12	6	8	0	9	14	8	8	7	20	122	121
Totals	G.	42	48	27	22	44	37	33	24	16	27	73	33	41	34	28	23	35	21	34	23	56	20	28	20	457	335
	S.	49	86	31	49	37	63	42	65	28	50	35	67	50	72	41	43	40	42	41	52	31	50	32	56	457	695

G.=Gonorrhœa; S.=Syphilis.

The Colloidal Gold Test.

The Public Health Laboratory is now prepared to perform the Lange or colloidal gold test. This test is used in distinguishing between certain syphilitic and nonsyphilitic diseases of the central nervous system. It is practically specific for paresis; in about 98 per cent of cases the typical paretic reaction (curve) is obtained. With a positive blood and spinal-fluid Wassermann a paretic colloidal gold curve is diagnostic of paresis.

"In cerebrospinal syphilis and tabes the colloidal gold reaction is of no diagnostic importance, and the results obtained should never be considered as more than confirmatory of the diagnosis in cases which are very suspicious in other respects. With the exception of paresis and taboparesis, the colloidal gold test is of value only as an aid in the diagnosis of syphilis of the central nervous system. In congenital syphilis, cerebrospinal syphilis, tabes, and secondary and tertiary syphilis the results are inconstant and only of confirmatory value; but its appearance in paresis, in many cases, before symptoms of the condition develop, renders the test of great value in early diagnosis, and as this complication may occur in any case of syphilitic infection the routine testing of the cerebrospinal fluid with the colloidal gold test is to be encouraged." (Craig: The Wassermann Test, 1918, p. 222.)

The spinal fluid submitted for the colloidal gold test must be free from red blood cells. A bloody spinal fluid, while suitable for the Wassermann test, cannot be used in the colloidal gold reaction. Mailing cases and sterile containers in which to send spinal-fluid specimens will be mailed to any physician upon request to The Director, Public Health Laboratory, Washburn College, Topeka.

Lower Death Rates in Every Period of Life.

The Department of Commerce, through the Bureau of the Census, has issued a statement showing deaths and death rates by age groups from different causes in 1910 and in 1920. In every age group the death rate was lower in 1920 than in 1910, the most pronounced change appearing in the rate for infants under 1 year of age, which declined from 13,084 per 100,000 in 1910 to 9,660 per 100,000 in 1920—a decline of about 26 per cent. The death rate for old people above 75 years of age shows a decrease of about 6 per cent, being 13,490 per 100,000 in 1920 as against 14,360 per 100,000 in 1910. In 1910 the death rate for infants was almost as high as it was for old people above 75 years of age, but in 1920 the infantile death rate was only about three-fourths as great as the death rate in old age. Particularly noteworthy is the decrease from 2,581 to 2,280 per 100,000 population in the age group 45 to 74—a decrease of 12 per cent—due largely to much lower rates from tuberculosis, acute nephritis and Bright's disease, organic diseases of the heart, accidents, and typhoid fever.

The general death rate from tuberculosis has decreased in the decade from 160 per 100,000 population to 114. The rate from acute nephritis and Bright's disease has decreased from 99 to 89. The rate from accidents has decreased from 84 to 71, and the rate from typhoid fever from 24 to 8.

On the other hand, increases in the rate from influenza, cancer and puerperal causes clearly show some of the danger spots.

CAUSE OF DEATH.		Death rate per 100,000 population at age of—						
		All ages.	Under 1 year.	1 to 14 years.	15 to 44 years.	45 to 74 years.	1 to 74 years.	75 years and over.
All deaths	1920	1,306.0	9,660.4	480.1	658.8	2,280.2	944.0	13,489.5
	1910	1,496.2	13,083.5	636.4	691.1	2,581.3	1,051.6	14,359.7
Tuberculosis (all forms)	1920	114.2	111.3	29.2	151.7	143.8	113.7	152.0
	1910	160.3	204.8	46.5	203.9	200.1	159.0	181.1
Influenza	1920	71.0	311.5	39.4	69.1	78.0	62.1	316.2
	1910	14.4	44.2	4.0	3.7	31.2	9.2	335.6
Pneumonia (all forms)	1920	137.3	1,252.0	76.7	79.6	181.9	100.1	1,025.3
	1910	147.7	1,613.4	104.1	50.4	222.7	99.7	1,191.3
Organic diseases of the heart	1920	141.9	34.3	11.3	36.1	386.9	101.9	2,957.8
	1910	141.5	78.4	14.7	43.6	414.6	109.3	2,532.6
Acute nephritis and Bright's disease	1920	89.4	31.8	7.1	25.0	256.1	67.9	1,602.6
	1910	99.1	59.8	11.4	38.9	299.3	83.0	1,305.3
Accidents	1920	71.4	111.0	56.2	57.3	92.6	64.3	489.7
	1910	84.4	116.6	50.9	77.7	116.7	78.0	487.1
Cancer (all forms)	1920	83.4	3.4	2.0	23.0	291.5	72.8	900.7
	1910	76.2	3.2	2.1	22.7	280.4	68.2	766.0
Typhoid fever	1920	7.8	2.9	6.3	9.5	6.4	7.9	4.1
	1910	23.5	6.1	14.4	31.0	19.6	24.1	13.5
Puerperal causes (total)	1920	19.2	....	0.2	39.6	1.1	19.9	....
	1910	15.7	....	0.1	31.0	0.7	16.3	....
Puerperal septicemia	1920	6.6	....	0.1	13.7	0.4	6.9	....
	1910	7.2	....	0.0	14.3	0.3	7.5	....
All other causes	1920	563.9	7,802.2	251.7	154.2	841.5	326.5	6,040.9
	1910	726.0	10,957.0	388.3	173.9	995.6	397.4	7,547.2

Tuberculosis Hints.

Life is not merely to live but to be well.

It is good to have money and things that money can buy; but it's good, too, to check up once in a while and make sure you haven't lost the things that money can't buy.

The way to get on your feet is to get off your feet.

The best thing for a bad lung is a good head.

Man's best asset is a cheerful disposition.

Do what your doctor tells you (but to play safe get a tuberculosis doctor).

Rest means total relaxation, which is best attained flat on the back, preferably out of doors.

Banish the broom; boil the milk; beware of the fly.

"Pessimist" is derived from two shorter words: "pest," a common nuisance; "mist," an atmospheric opaqueness interfering with and distorting vision. Hence, then, pessimist—a common nuisance who sees things through a fog.

Theoretically a patient can be cured of tuberculosis at home; just as theoretically a boy can learn Latin at home if he has the textbooks.

Beware of the physician who says "you have a spot on the lung," "lung trouble," "weak lungs," or a "run-down condition." This is only part of the truth. The "fresh-air crank" has grown in numbers until his hobby is that of the multitude and he is no longer a crank.

Nine-tenths of the entire population die with, but not of, tuberculosis.

The most important point in the diagnosis of tuberculosis is to know when to suspect it.—*Ohio's Health.*

Gas Poisoning.

A letter of warning from the Surgeon General:

JANUARY 30, 1922.

Dr. S. J. Crumbine, Secretary, State Board of Health, Topeka, Kan.:

DEAR DOCTOR—It has come to the attention of the Bureau that in some of the larger cities of the country where cases of carbon monoxide poisoning occur more or less frequently, it sometimes happens the emergency ambulances responding to calls for aid do not carry oxygen that may be available for treatment of carbon monoxide poisoning.

Escaping illumination gas and the exhaust gas from automobiles and gasoline engines are common sources of carbon monoxide poisoning. Cases of poisoning from this gas occur more frequently than is generally realized.

Recent investigations made conjointly by the United States Bureau of Mines and the Public Health Service indicate that pure oxygen will remove carbon monoxide from the blood in direct proportion to its concentration; that is, about five times as fast as when breathing ordinary air. The chance of recovery of a patient is much greater if the removal of the carbon monoxide from the blood can be accomplished in a very short time.

It therefore appears desirable, because of the rather frequent ocurrence of cases of carbon monoxide poisoning, that the importance of emergency ambulances carrying oxygen available for prompt treatment of such conditions be brought to the attention of the hospital authorities in all the larger cities, and those not already so equipped be urged to provide such equipment at once.

A letter of recent date from this Bureau will be recalled in which mention was made of the danger of carbon monoxide poisoning by exhaust gas from automobiles and gasoline engines. The present letter is intended to supplement the previous one and merely add a word as to the importance of hospitals and ambulances keeping oxygen available for prompt treatment of cases of carbon monoxide poisoning. Respectfully,

H. S. CUMMING, *Surgeon General.*

In view of the great importance of administering oxygen to these victims at the earliest possible moment, it is recommended that all ambulances be equipped with oxygen tanks. It may be that when the victim is found his breathing has stopped or is very weak and irregular. In this case, after quickly removing the victim to good air, or while administering oxygen, one of the rescuers should begin at once artificial respiration by the Schaefer method. This method is described below:

Place the person on his abdomen. Remove from his mouth all foreign bodies, such as false teeth, tobacco and gum. See that the tongue is forward. Turn his head to one side and rest it on his forearm, so that the mouth and nose will not come in contact with the ground, and extend the other arm forward. If the person is thin, prepare a pad of folded clothing or blankets and place it under the lower part of his chest. Do not make this pad too thick. Do not wait to loosen the victim's clothing, but begin artificial respiration without delay. An assistant may remove all tight clothing from the victim's neck, chest and waist, and place blankets, hot-water bottles, safety lamps or hot bricks, well wrapped in paper or cloth, about the person.

Kneel, straddling the person's thighs and facing his head; the palms of your hands are placed over the short ribs with your thumbs parallel with the spine about two inches apart and your fingers spread out as much as possible, the ends of the little fingers reaching just below the last rib; with arms held straight, swing forward slowly so that the weight of your body is gradually brought to bear on the person. This operation, which should take about two seconds, must not be violent, lest the internal organs be injured. The lower part of the chest and also the abdomen are thus compressed and air is forced out of the lungs. Now immediately swing back slowly to remove the pressure, but leave your hands in place. Through their elasticity, the patient's chest walls expand and his lungs are thus supplied with fresh air. After two seconds swing forward again and repeat deliberately about fifteen times a minute.

Continue if necessary for at least three hours without interruption, or until natural breathing has been restored or a physician has arrived. Even after natural breathing begins, carefully watch that it continues. If it stops, start artificial respiration again.

While the administration of oxygen is by far the most important factor in the treatment and cannot be overemphasized, other things should be done to help the patient. He should be kept *quiet* and *lying flat*, to help his weakened heart. When he revives he should *not* be *allowed* to *walk* about or in any way *exert* himself, for there is danger of heart failure. Heat from safty lamps, hot-water bottles or warm bricks, rubbing the arms and legs, and keeping the patient well covered with blankets, all help the circulation and aid in tiding the body over a period of low vitality. The safety lamps, hot bricks, etc., should be well wrapped in cloth or paper as a precaution against burning the patient. Other stimulants, such as hypodermics of caffein, sodium benzoate or camphor in oil, should not be administered except by a doctor, after he has considered the possibility of overstimulation and consequent collapse. The patient should be kept in bed for a day at least. Later he should be treated as a convalescent, being given plenty of time to rest and recuperate. Just how long this time should be depends on the severity of his poisoning and should be decided by his physician.

SUMMARY OF TREATMENT.

1. Administer oxygen as *quickly* as *possible,* and in as pure a form as is obtainable, preferably from a cylinder of oxygen through an inhalator mask.
2. Remove from atmosphere containing carbon monoxide.
3. If breathing is feeble, at once start artificial respiration by the prone pressure method.
4. Keep the victim flat, quiet and warm.
5. Afterward give plenty of rest.—*U. S. Bureau of Mines, Reports of Investigations.*

Kansas.

God made the world, and rested. And then, to make creation doubly sweet, He made the state of Kansas. He took the love and laughter of the skies, the sun and dew, the breath of myriad flowers, the light of rosy dawns and golden sunset splendors and fashioned here the pride and glory of the newborn climes. Then round this Eden of the world He placed the flaming sword of drought and hardship and difficulty and danger, that none might enter to her heart of gold but those whose hearts were true and brave and worthy as her own.

The race that wooed and won this peerless state deserved to win her. They came of stock that conquered worlds. They brought high hope and purpose firm and faith that would not falter. The desert specter, lean and grim, commanded them to halt. The clouds withheld the boon of rain, the sun sent forth his furnace flames, the blighting winds blew fiery breaths, the earth refused her goodly store, gaunt Famine stalked abroad, the darts of Treachery assailed them. They faced a somber sea whose waves beat dirges of despair on shadow-blackened shores of Desolation.

And yet they stayed, these men and women of heroic mold. They tamed the Wild, they conquered Fate, they drove Oppression to his lair, they fought for principles that gave new life and impulse to a Nation struggling upward toward the right. They lifted high the banner of the stars and dreamed the star of Kansas there, the brightest constellation of them all.

So live and love and work and win the race of Kansas of to-day. Their eyes are on the future's peaks, their steps lead ever sunward, their hearts are steeped in Nature's gold, their souls have caught the vision. No halting as they climb the slopes that lead to new endeavors, no looking back to outgrown forms and moldy monuments and milestones of the past, but pressing on new trails to blaze, and finding as they go new hopes, new problems, new achievements. A race unparalleled in song or story, a race that dares to point the way and lead and climb to higher planes and brighter and broader vistas.

I see a state resplendent with the deeds that were and are, and promise of the deeds that are to be. I see the smile of sun and sky, the sheen and shade of woody depths, the burnished gold of harvest fields, the light and love of happy homes, the billowy tides of emerald meadows, the miracle of seasons as the glad years come and go, the witching splendor of the night, the strength and glory of the day. I hear the reaper's joyful song, the herdsman's call, the shout of harvest home, the splash of streams, the rustle of the corn, the low of kine, the hum of life and industry, the mingled music of the mart and farm. An empire stately, board and free, a blissful Eden of the heart, a Paradise by Nature formed, by genius nurtured and refined. A race with hope and faith endowed, with learning's light upon its brow, with strength to tread the upward path, with dreams that mount to vast and radiant reaches of the stars.—*John Clem Bradshaw in Kansas City Star.*

A warning from California has been issued by the California state board of health. The warning is as follows: "Tuberculosis demands rest, food, fresh air, and peace of mind. This may not mean a change of climate. California has no public institutions with free care for nonresidents. With funds to live for a year, come, but do not rely on finding light work for support. The state board of health warns you, because it wishes to spare you homesickness and suffering from financial strain."

Report of Division of Water and Sewage, December, 1921.

ALBERT H. JEWELL, Chief.

Permits issued or refused for waterworks and sewerage.

Date.	*Place.*	*Nature of improvement.*
Dec. 2	McPherson	Sewer extensions.
Dec. 10	Ottawa	Sewer extensions (lateral sewers Nos. 71, 72, 73).
Dec. 12	Larned	Water-supply system.
Dec. 14	Salina	Sewer extension; disapproved.
Dec. 17	Lindsborg	Sewer extensions.
Dec. 22	Marion	Water purification.
Dec. 28	Hoxie	Water supply.
Dec. 29	Ellis	Sewer extensions.

Inspections Made.

Date.	*Place.*	*Nature of improvement.*
Dec. 1-6	Caney	Final inspection of filter plant.
Dec. 6	Coffeyville	Ozark smelter, waste investigation.
Dec. 7	Marion	Investigation of sanitary conditions.
Dec. 7	Paola	Check inspection of filter plant.
Dec. 12	El Dorado	Operation test of activated sludge plant.
Dec. 22	Topeka	State hospital water supply.

Plans or preliminary reports have been received, or conferences have been held with municipal authorities for new work at the following places:

Humboldt	Refinery; sewers and waste disposal.
Lawrence	Water improvement.
Oberlin	Sewers and sewage disposal.
Sabetha	Water improvement.
Belpre	Water supply.
Herington	Water improvement.
Highland	Water improvement.
Howard	Water filtration, sewers, and sewage disposal.
Salina	Sewage disposal.
Moline	Sewerage.
Sterling	Sewerage.
Topeka	State hospital; water improvement.
Utica	Water supply.
Valley Falls	Additional water supply.
Wathena	Water supply and sewerage.
Lawrence	Municipal swimming pool.
Parsons	Water filtration.
Neodesha	Water purification improvements.
Pratt	Water improvements.
Ottawa	Sewer extension, lateral No. 74.

Record of analyses made in water and sewage laboratory at Lawrence during the month of December, 1921:

	Bact.	*Chem.*	*Miscel.*
City supply	444	2	..
Bottled water	2	..	..
Private supplies	13	..	..
Sand	..	..	2
Chlorides	..	..	14
Bacteriological	8	..	..
Ice supply	2	..	..
Totals	469	2	16—487

Licenses Issued.

Date.	*Place.*	*Person or firm and purpose.*
Dec. 13	Arkansas City	Atchison, Topeka & Santa Fe. City supplies.
Dec. 13	Arkansas City	Missouri Pacific. City supplies.
Dec. 13	Arkansas City	Kansas Southwestern. City supplies.
Dec. 13	Wellington	Atchison, Topeka & Santa Fe. City supplies.
Dec. 2	Wichita	Atchison, Topeka & Santa Fe. City supplies.
Dec. 2	Wichita	Chicago, Rock Island & Pacific. City supplies.
Dec. 2	Wichita	Arkansas Valley Interurban. City supplies.
Dec. 2	Wichita	Missouri Pacific. City supplies.
Dec. 2	Wichita	Midland Valley. City supplies.
Dec. 2	Wichita	St. Louis & San Francisco. City supplies.
Dec. 20	El Dorado	Country Club Water Co. Bottled water.

A Youth There Was.

(With apologies to Kipling and his "Vampire.")

A youth there was who lost his health,
Even as you and I,
In seeking the thing that man calls wealth,
Even as you and I;
And now he knows the mistake he made.
To a "San" he went and long he stayed,
Even as you and I.

He longed and fought for the thing he lost,
Even as you and I;
Though his heart was heavy for he knew the cost,
Even as you and I.
But he stuck to the "game" through thick and thin;
He played it well and he played to win
Even as you and I.

And long he tried and hard he fought,
Even as you and I;
Of quitting the "game" many times he thought,
Even as you and I.
But he played it through and regained the health
That a fool had lost in seeking wealth,
Even as you and I.

—*H. Conrad, in the Herald of the Well Country.*

It was at the live-stock show. A doctor stood admiring a large fat hog, when a small boy standing by piped up: "That's my father's hog. He got the first prize."

"Wonderful," said the doctor; "certainly a very fine hog." Then he looked at the boy. "How old are you, son?" he asked.

"I'm twelve past," said the boy.

"Why," said the doctor, "you are small for a nine-year-old. What do you eat and drink?"

"Just what the rest of the folks do—bread, meat, pie, potatoes, coffee, cake and tea."

"But," queried the doctor, "don't you drink milk?"

"Naw," said the boy in a tone of disgust; "we feed milk to the hogs."

Write your own moral.—*Chicago Bulletin.*

Diphtheria deaths are due to failure to administer antitoxin; to insufficient antitoxin, or delayed antitoxin treatment. The antitoxin is harmless.

The chewing-gum bill for our state would soon sanitate every rural home, and if we add the soft drinks, would care for all the tuberculosis and establish health centers at every schoolhouse.

The physician or midwife in attendance at a birth must register the child within ten days, and the mother should demand her rights in the protection of her child by its registration.

Ophthalmia neonatorum is gonococcus infection of the eyes of the newborn. It causes 30 per cent of all blindness. It is prevented by a drop of 1 per cent silver nitrate solution in baby's eyes at birth.

To prevent, rather than cure disease, is the ideal of advanced medical thought. To gain the public confidence and appreciation is what every true physician craves and demands.

No public-health evidence is more definite than that vaccination, properly performed, protects against smallpox. The more persons vaccinated, the fewer cases of smallpox will we have.

Chicken pox is contagious and attacks children. It runs a mild course of about a week. The virus is found in the mouth and nose, but not in the eruption, which resembles smallpox.

German measles is very contagious. It is caused by a virus found in the secretions of the mouth and nose and is carried in the breath in talking and coughing. It runs a mild course.

Diphtheria is greatly on the increase. The death rate among children under five is higher than from tuberculosis at all ages. The Schick test determines a child's susceptibility to diphtheria.

Christmas seals sold very well in Kansas. Some of you have not yet sent in your dollar to the Kansas State Tuberculosis Association. It is never too late for a good act.

Fifteen per cent of all the deaths that occur in the United States and Canada are among children under one year of age. Infant mortality in Kansas may be reduced 50 per cent.

Recent statistics indicate that the one classification in which tuberculosis has not decreased is that of adolescent girls. Fashions in dress may have some share in this, but more likely it is because more young girls are now working in offices and factories.

Higher Mathematics.

School Nurse: Did you open both windows in your sleeping room last night as I ordered?

Pupil: No, ma'am; not exactly. There's only one window in my room, but I opened it twice.—*Pick-up.*

Branding of Vinegar.

Under date of December 21, 1921, the following notice was issued to manufacturers, wholesalers and retailers of vinegar in the state of Kansas:

"GENTLEMEN—Pending a decision of the United States courts in the question of the branding of vinegar made from such evaporated apple products as cores, peels and chops, this department tentatively suggests the following branding for such vinegar: 'Apple Vinegar Made from Evaporated Apple Products,' or 'Evaporated Apple Products Vinegar,' the whole phrase to be the name of the product, and of clear, legible type, the words 'apple vinegar' to be no more prominent than the others.

"Very truly yours,
"KANSAS STATE BOARD OF HEALTH."

The Vow.

By EDGAR A. GUEST.

I used to think it mattered, used to think I had to be
Forever at the business of acquiring wealth for me;
Then I gave myself to labor and I bent my back to toil,
And to make myself the richer oft I burned the midnight oil,
Till one day a little fellow seemed to look me through and through
And he asked if making money was the only thing men do.

It was just a youngster's question, but it struck me like a blow.
He had heard me talk my business and he'd seen me come and go.
He had watched me night and mornin', either happy or dismayed,
Elated or disgruntled by investments I had made,
And he'd come to the conclusion, I could see beyond a doubt,
That money was the only thing his daddy thought about.

I know I choked a little as I took him on my knee
And I turned away a moment so a tear he wouldn't see;
Then I hugged him somewhat tighter than it was my wont to do,
And I told him, "More important than all else on earth are you.
There's a bigger thing than money and there is a fairer joy,
And it's wrapped up in the future of a certain little boy."

I couldn't quite explain it, for he couldn't understand,
But I know he caught the pressure of his daddy's rugged hand,
And I know we both grew closer as I held him on my knee
And tried to draw a picture of the man I hoped he'd be.
But what's more, I'd learned a lesson—one that caused my eyes to swim,
And I vowed to God that evening that I'd spend more time with him.

(Copyright, 1921, by Edgar A. Guest.)

The Monkey Glands.

By Roy K. Moulton.

I keepa da monk and I playa da org
And I maka da plenty mon.
Da monk do da dance and passa da cup
And maka da keeds da fun.
Witouta da monk, I maka no biz
And panic will come instead.
Oh, what will become of Italian boy
When all of da monks ees dead?
Eet maka me sick by da heart to know
They cuta da monk for glands,
And they will be after my monk, too.
Dees ees a helova lands.

Oh, why not they carve up da hippopot,
That mountains of flesh and bone,
Da lion, da snake or da elephant,
And leave-a da monk alone?
Da times will not be what they used to is
Withouta no monk and cup;
Oh, why not they carve up da poodle-dog
Or some other reech man's pup?
My heart, she ees very sad to-day,
No song by da night I sung.
Oh, why should they keela my leetle friend
To maka da old man young?

—*New York Evening Mail.*

□

BULLETIN

OF THE

Kansas State Board of Health

Published Monthly at the Office of the Secretary of the Board, Topeka, Kan.

S. J. CRUMBINE, M.D., Editor.

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Eat plenty of the leafy vegetables.

The "clean-up and paint-up" season is here.

The best spring tonic—the spade and the rake.

The robin and the bluebottle fly are the early harbingers of spring.

Have you had a complete physical examination within the year?

Wouldn't a general cleaning of our entire premises help nature to make things beautiful these wonderful spring days?

If manure piles are removed and outside toilets made fly-proof there will be but few flies in such a community.

In the spring have your spark plugs cleaned, your cylinders ground and your teeth cleaned and a complete physical examination made. If you can't afford all of these, let the spark plugs and cylinders go.

MORBIDITY REPORT FOR FEBRUARY, 1922.

COUNTIES AND CITIES.	Tuberculosis	Typhoid and Paratyphoid	Smallpox	Diphtheria	Influenza	Scarlet Fever	Measles (morbilli)	German Measles (rubella)	Whooping Cough	Chickenpox	Mumps	Pneumonia (all forms)	Meningitis (epidemic)	Poliomyelitis (epidemic)	Other diseases (see Addenda)
THE STATE	86	7	193	311	2556	481	21	7	33	343	71	470	5	1	199
Allen	0	0	0	3	13	9	0	0	2	0	1	1	0	0	0
Anderson	0	0	0	1	0	5	0	0	0	0	0	0	0	0	0
Atchison, except	0	0	0	1	2	1	0	0	5	2	0	1	0	0	0
Atchison city	1	0	0	4	1	8	0	0	0	1	0	0	0	0	2
Barber	0	0	0	1	2	5	0	0	0	1	1	0	0	0	0
Barton	2	0	16	3	2	4	0	0	0	7	10	0	0	0	1
Bourbon, except	0	0	1	3	0	0	0	0	0	0	0	2	0	0	0
Fort Scott	2	0	0	13*	1	2	0	0	0	0	0	6	0	0	3
Brown	0	0	0	1	28	5	0	0	0	0	0	1	0	0	2
Butler	1	0	0	9	38	2	2	0	0	1	1	28	0	0	0
Chase	0	0	0	2*	21	3	0	4	0	0	0	1	0	0	2
Chautauqua†	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cherokee	1	0	0	11	23	7	0	1	0	0	0	3	0	0	1
Cheyenne	0	0	0	0	1	1	0	0	0	2	0	0	0	0	0
Clark	0	0	0	1	2	1	0	0	0	0	0	0	0	0	0
Clay	0	0	3	1	0	3	0	0	0	0	0	0	0	0	0
Cloud	0	0	0	0	21	11	0	0	0	13	0	1	0	0	3
Coffey	0	1	0	1	0	3	0	0	0	7	0	0	0	0	1
Comanche	0	0	0	4	0	10	0	0	0	0	0	1	0	0	0
Cowley	0	0	3	5	100	0	0	0	0	0	0	0	0	0	1
Crawford	3	0	4	3	7	7	0	0	0	8	0	19	0	0	0
Pittsburg	2	0	1	5	0	2	0	0	0	3	0	2	0	0	2
Decatur	0	0	0	0	19	3	1	0	0	6	0	1	0	0	0
Dickinson	0	0	1	4	94	7	0	0	0	1	0	7	0	0	1
Doniphan	0	0	0	2	20	4	1	0	0	7	0	2	0	0	0
Douglas, except	0	0	0	1	42	0	0	0	0	0	0	0	0	0	4
Lawrence	3	0	0	0	34	3	2	0	0	9	0	5	0	0	0
Edwards	0	0	0	0	0	7	0	0	0	0	0	1	0	0	0
Elk†	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ellis	0	0	0	10	0	0	2	0	0	0	0	2	0	0	0
Ellsworth	0	0	0	1	262	3	0	0	0	4	0	15	0	0	2
Finney	0	0	2	1	0	2	0	0	0	2	9	4	0	0	1
Ford	0	0	0	4	8	6	0	0	3	6	2	1	0	0	1
Franklin	0	0	0	1	0	3	0	0	0	0	0	1	0	0	0
Geary	0	0	3	3	0	10	0	0	0	24	1	7	0	0	1
Gove	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0
Graham	0	0	0	7	6	3	0	0	0	0	0	0	0	0	0
Grant†	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gray	0	0	1	3	0	2	3	0	0	7	5	2	0	0	0
Greeley	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Greenwood	0	1	0	1	51	3	0	0	2	3	0	9	0	0	0
Hamilton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Harper	0	0	0	6	3	6	0	1	0	1	0	1	0	0	0
Harvey	1	0	2	2	0	12	0	0	0	0	0	1	0	0	0
Haskell	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0
Hodgeman	0	0	3	0	0	3	0	0	0	0	0	0	0	0	0
Jackson	0	1	0	1	17	3	0	0	0	0	0	0	0	0	0
Jefferson	0	0	0	3	33	5	0	0	0	1	0	5	0	0	0
Jewell	1	0	0	0	91	21	0	0	0	1	0	2	0	0	0
Johnson	0	0	0	6	5	5	0	0	0	0	0	7	0	0	0
Kearny	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0
Kingman	0	0	0	3	25	6	0	0	0	0	0	0	0	0	1
Kiowa	0	0	0	0	30	1	0	0	0	0	1	0	0	0	0
Labette, except	1	1	13	3	1	7	0	0	0	0	0	0	0	0	0
Parsons	1	0	0	3	1	2	0	0	0	0	0	1	0	0	4
Lane	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0
Leavenw'th, except	0	0	1	4	6	2	0	0	0	0	0	8	0	0	1
Leavenworth city	1	0	1	8	0	1	0	0	0	0	0	7	0	0	2
Lincoln	0	0	0	2	254	0	0	0	0	0	0	1	0	0	0
Linn	0	0	0	4	34	4	0	0	0	0	0	10	0	0	8
Logan	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Lyon	0	0	0	3	2	3	0	0	0	5	0	1	0	0	0
Marion	0	0	2	5	70	13	2	0	2	0	0	2	0	0	2
Marshall	0	0	0	0	121	10	1	0	1	8	0	3	0	0	0
McPherson	0	0	1	4	2	3	0	0	0	0	0	2	0	0	0
Meade	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0

MORBIDITY REPORT FOR FEBRUARY, 1922—Concluded.

Counties and Cities.	Tuberculosis	Typhoid and Paratyphoid	Smallpox	Diphtheria	Influenza	Scarlet Fever	Meases (morbilli)	German Measles (rubella)	Whooping Cough	Chickenpox	Mumps	Pneumonia (all forms)	Meningitis (epidemic)	Poliomyelitis (epidemic)	Other diseases (see Addenda)
Miami	0	0	0	2	0	1	0	0	0	0	0	2	0	0	0
Mitchell	0	0	1	0	10	0	0	0	0	0	0	1	0	0	0
Montgomery, except	0	0	0	5	26	0	0	0	2	7	0	11	1	0	0
Coffeyville	1	1	0	8	3	2	1	0	0	0	1	11	0	0	1
Morris	1	0	17	2	30	8	0	0	0	4	0	0	0	0	1
Morton	0	0	0	0	7	0	0	0	0	0	0	2	0	0	0
Nemaha	0	0	0	2	0	5	0	0	0	0	0	3	0	0	0
Neosho	1	0	0	1	0	10	0	0	0	3	0	0	0	0	0
Ness	0	0	3	0	0	3	0	0	0	0	0	1	0	0	0
Norton	0	0	0	0	0	12	0	0	0	2	0	1	0	0	1
Osage	0	0	0	16	3	0	0	0	0	8	0	2	0	0	0
Osborne	0	0	8	0	15	15	0	0	0	6	1	0	0	1	0
Ottawa	0	0	0	0	33	2	0	0	0	1	0	0	0	0	0
Pawnee	0	0	0	3	0	1	0	0	0	0	0	0	0	0	0
Phillips	0	0	7	0	21	7	0	0	0	0	0	0	0	0	0
Pottawatomie	1	0	0	0	5	1	0	0	5	0	0	0	0	0	0
Pratt	0	0	2	3	6	8	0	0	0	0	0	0	0	0	0
Rawlins	1	0	0	2	11	5	2	0	0	0	0	0	0	0	1
Reno, except	0	1	11	0	3	5	0	0	0	0	0	2	0	0	0
Hutchinson	0	0	10	6	0	7	0	0	0	1	0	5	0	0	1
Republic	1	0	0	3	79	0	0	0	0	0	0	0	0	0	2
Rice	0	0	8	5	19	3	0	0	0	7	0	11	0	0	0
Riley	0	0	0	0	52	5	0	0	0	10	0	3	0	0	0
Rooks	1	0	0	0	6	2	0	0	0	0	0	0	0	0	0
Rush	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Russell	0	0	0	7	1	3	0	0	0	0	0	1	0	0	0
Saline, except	0	0	0	1	56	1	0	0	0	0	0	0	0	0	0
Salina	0	0	0	6	12	6	0	0	0	4	0	0	0	0	2
Scott	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Sedgwick, except	1	0	1	7	22	8	0	0	0	0	0	3	0	0	0
Wichita	6	0	22	15	73	31	3	0	6	41	4	25	0	0	60
Seward	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0
Shawnee, except	4	0	1	5	19	0	0	0	0	2	0	0	0	0	6
Topeka	9	0	3	16	16	6	0	1	0	37	0	73	2	0	25
Sheridan	0	0	0	0	94	1	0	0	0	0	0	4	0	0	0
Sherman	0	0	0	1	0	4	0	0	0	0	0	5	0	0	0
Smith	0	0	0	1	9	15	0	0	0	0	0	2	0	0	0
Stafford	0	0	1	0	2	4	0	0	0	0	0	0	0	0	0
Stanton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stevens	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sumner	0	0	7	8	271	15	1	0	3	4	33	31	0	0	2
Thomas	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0
Trego†	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wabaunsee	0	0	0	2	53	5	0	0	0	4	0	4	0	0	1
Wallace	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
Washington	0	0	0	1	17	0	0	0	0	1	0	4	0	0	0
Wichita	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wilson	18	0	3	2	32	0	0	0	0	44	0	22	0	0	0
Woodson	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
Wyandotte, except	0	0	3	1	10	1	0	0	0	0	0	3	2	0	0
Kansas City	21	1	26	12	37	14	0	0	2	24	0	64	0	0	28
Rosedale	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22

* Diphtheria carriers: Fort Scott, 1; Chase county, 1.

† Delinquent.

Other communicable diseases: Erysipelas, 18; cancer, 8; ophthalmia neonatorum, 2; gonorrhœa, 92; syphilis, 66; chancroid, 9; paresis, 3; lethargic encephilitis, 1.

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The Psychology of Health Education.

By Beatrice Chandler Gesell, New Haven, Conn., in *Mother and Child.*

In spite of the splendid achievements of our health organizations which have succeeded in focusing the attention of the nation upon health, it is time for an appraisal of present-day methods of health education. Health is not a commodity to be sold, but a question of personal ethics, and must therefore be approached through a psychological analysis of children, their nature and their daily needs. We must pause to consider whether in the dramatic delight of elaborating an idea we are not exploiting the psychology of advertising rather than interpreting the psychology of childhood.

Health education does not consist in the several activities connected with cleansing the teeth, brushing the hair, washing the hands, but in the development of the driving power of the ideals behind these activities. The law of association is a fundamental psychological law. "Temporary associations and temporary centers of association are continually being formed and continually being broken down, to be replaced by new ones, and it is only the result of all this activity that persists and constitutes permanent training."

There is danger of establishing too low levels of habit, unless through an intimate knowledge of childhood we surround children with adequate stimuli which will build up reactions which will carry over into maturity. Some of these stimuli are biological and relate themselves to the child's physical being, but a broader and more hopeful source of direct education lies in the manifold emotional attitudes and associations which constitute the aspirations of the young child.

Health must come to the child through the expression of his instinctive impulses, and not by a deliberate, conscious and somewhat sophisticated pursuit of hygiene. Health as an abstract idea has no fascination for the child. As a state or condition to be attained in the future it will not arrest his attention. The child is interested in immediate results. He runs for the most beautiful butterfly, and the one which is close at hand. He is stimulated to effort in response to the images and persuasions of his present needs.

What are some of the native impulses which may be utilized in health education?

1. *A reverence for life, and an abiding interest in everything that lives.* Those of us who have seen a group of noisy children suddently come upon a nest of baby birds realize the hush and delight which this intimate contact with new life always arouses. So it is with nature study, and excursions offer endless opportunities for unconscious instruction in the care of the body. The child who takes care of a pet will absorb many of the fundamentals of personal hygiene. A baby in the home or in the schoolroom could be made the starting point of valuable demonstrations in health education.

2. *A love of beauty.* Every child is sensitive to beauty, and yet how little has been done to bring to children in a concrete form the beauty and grace of the human body? The child's mind, through posters, sculpture and painting, should be crowded with images of beauty and grace so that he will desire to possess a lithe, healthy body.

3. *An interest in rhythm and motion.* The exercise which we offer our children is too often perfunctory and meaningless. Let us give them an op-

portunity for rhythmic dancing and open to them the delights of pantomime, and so put the body to a practical test. Let children feel in their muscles the joy of motion and the sense of power which come with the possession of strong limbs and a healthy body. Abandon and spontaneity will do more to develop muscular control in the young child than all the exercises one can fashion.

4. *Desire to be commended.* We do not put a premium upon health. If adults do not respect their health how can we expect young children to set up standards for themselves? Let mothers and teachers place the seal of their approval upon the healthy and efficient body and the effect upon children will be immediate. We are too apt to admire perfection of feature or beauty of attire and so stress personal vanity rather than personal hygiene.

5. *A determination to be happy.* And now we must consider the principles of health education from the standpoint of mental hygiene and the conditioned reflex. To capture and retain health the child must have a definite attitude toward health which is wrapped round with pleasant emotions. We have reached the point where we must enlarge our definition of health to include mental attitude and daily adaptation to life. Many, many children can never be physically fit, and their hope lies in an education which will make it possible for them to find compensation in their ability to adapt themselves to the community life. They must be comforted by the assurance that mental fitness and mental health are equally as important as the number of red corpuscles in a blood count.

Fortunately the child's determination to be happy is so deep-seated as to be truly instinctive. Even when he is sick or paralyzed in body or arm he has a will to conquer, or at least to adapt. A physical disability may actually stimulate the development of his character. Indeed, he is a chronic invalid in the full sense of the term only when he has become distorted or defeated. Here we glimpse some fundamental relations between physical and mental hygiene, which suggest that health education should be more deliberately directed toward maintaining the integrity of the mind.

Can we not make our definition of health education big enough to include the whole art of healthy living, and so fill the children's early years with frequent triumphs and abundant joy that they may know the sense of power and the enlargement of personality which achievement brings. Then we shall strengthen not only bodily resistance but the sinews of character.

A Home Massage.

The housewife who is fortunate enough to possess an electric sweeper can take her facial massage in the privacy of her own home and at her own convenience, without the bother of dressing and going to a specialist at a stated time.

All she has to do after steaming her face and applying the cream is to attach the long hose to her sweeper that is used to clean the walls, and not attach any of the appliances, but press the end against her face. The suction is strong enough to give the proper massage, and the operation can be as long or short as she may desire it, and the result very satisfactory.—*Mrs. Lucy Strong in Healthy Home.*

Kansas Bureau of Child Research.

As a part of the service of the Kansas Bureau of Child Research, which has its administrative offices at the University of Kansas at Lawrence, the department of psychology at the University is opening its psychological clinic to parents, juvenile judges and children's institutions in as far as time and facilities will permit.

To this clinic children may be brought who appear to be mentally different from other children, such as children who are retarded in their school work, who exhibit eccentricities of behavior, who are incorrigible, especially children who are brought to court for misbehavior; also children who are unusually bright or exhibit signs of genius in certain directions.

The service of the examiners will be given free of charge, but all other expenses, such as living and transportation, must be met by the parties bringing said children.

In all instances arrangements and definite appointments must be made by mail or telephone. Address all communications to Dr. Curt Rosenow, Department of Psychology, State University, Lawrence, Kan.

Registration Area for Morbidity Reports by Counties and First-class Cities in Kansas.

In a previous issue of the Bulletin (September, 1921) it was announced that a registration area for the reporting of communicable diseases in the state of Kansas had been created. The following counties and first-class cities are admitted to this registration area on the basis of their reports for 1921:

Counties:

- Butler.
- Cowley.
- Geary.
- Jefferson.
- Osborne.
- Seward.
- Shawnee.
- Sumner.

First-class cities:

- Leavenworth.
- Hutchinson.
- Wichita.
- Topeka.

It may seem to the average person that the State Board of Health lays undue stress upon the reporting of communicable diseases. This is not so, however, for unless the local health officer knows of the existence of cases of infectious disease he is unable to take any action towards preventing the occurrence of others. It is a cardinal principle in preventive medicine that the health authorities must know of the existence of disease before they can take steps to prevent its spread.

In order to determine whether the physicians of a county are consistently reporting all their cases of communicable disease a somewhat indirect method has to be used. One could, of course, write to each doctor in the state and ask him whether he reported his cases regularly or not, but it is hardly fair to expect physicians to voluntarily indict themselves, and furthermore experience has shown that probably half of the doctors would not reply to the letter.

Instead of applying this direct method, therefore, a roundabout way of appraising a county must be adopted. And so the following score card has been elaborated. In this score card 100 marks constitutes a perfect score, and 80 marks must be obtained by a county before it is admitted to the registration area. These marks are distributed as follows:

A. 40 marks for regular reporting of health officer.
B. 20 marks for reasonably low fatality rate.
C. 30 marks if the morbidity rates do not fall below the average.
D. 5 marks for a low typhoid death rate (below 10 per 100,000).
E. 5 marks for a low smallpox death rate (below 1 per 100,000).

A. If the health officer is so indifferent as not to send his reports in regularly it is fair to assume that he is indifferent in other ways. Reports should come in to the State Board of Health weekly from each county and first-class city. No marks are lost for two delinquencies, but each delinquency above two costs five marks. Ten delinquencies, therefore, mean that all forty marks are lost.

B. By "fatality rate" is meant the percentage of cases reported which die. Of 100 people, for example, that have typhoid fever, 10 usually die. If one is told, therefore, the number of deaths from typhoid fever which have occurred in a county, one can estimate fairly well the number of cases. Now, we know of practically all the deaths that occur in a county, since permission to bury a body is not given without a death certificate; consequently, if we know the number of deaths from communicable diseases we know the number of cases that probably occurred. Some counties actually report more deaths than cases, while others report abnormally high fatality rates. The normal fatality rates have been worked out as accurately as possible for the five diseases—typhoid fever, smallpox, measles, scarlet fever, and diphtheria. A county loses four marks for each disease in which the reported fatality exceeds the normal.

C. By "morbidity rate" is meant the number of cases of a disease reported per 1,000 people. Thus a county of 5,000 people which reports 10 cases of scarlet fever has a morbidity rate of 2 per 1,000. Almost invariably a certain number of cases of communicable disease will occur each year in each county. At the State Board of Health the standard morbidity rate for each disease has been determined, and when the number of cases of a disease reported exceeds its standard the disease is considered to be epidemic. If a county reports no case of diphtheria during the year it may be that no case of that disease has occurred, but it is more likely that cases occurred and were not reported. The disease or morbidity rates for the five principal diseases have been worked out for each county. For each disease that falls below the standard six marks are lost.

D. and E. Now, smallpox and typhoid fever are entirely preventable diseases. Counties, therefore, in which preventive work is active will have a low morbidity rate in these diseases, and so will lose marks which may seem to be unfair. If the morbidity rate is really low, however, deaths will be few and marks lost in having too few cases will be earned by having few deaths.

Figures for each county and first-class city follow:

MORBIDITY AND FATALITY SCORES BY COUNTIES AND FIRST-CLASS CITIES IN KANSAS, 1921.

COUNTIES AND CITIES.	Does County Health Officer report regularly	Fatality rate.					Morbidity rate.					Low typhoid death rate (below 10 per 100,000)	Low smallpox death rate (below 1 per 100,000)	Total
		Typhoid	Smallpox	Measles	Scarlet fever	Diphtheria	Typhoid	Smallpox	Measles	Scarlet fever	Diphtheria			
PERFECT SCORE	40	4	4	4	4	4	6	6	6	6	6	5	5	100
Allen	0	0	4	4	0	0	0	6	0	6	6	0	0	26
Anderson	40	4	0	4	0	0	0	0	0	6	6	5	0	65
Atchison, except	5	0	4	4	4	0	0	0	0	0	6	0	5	28
Atchison city	25	4	4	4	4	4	0	0	0	6	6	5	5	67
Barber	0	0	4	4	4	4	0	0	0	6	0	5	5	32
Barton	10	0	4	4	4	4	0	6	6	6	6	5	5	60
Bourbon, except	0	4	4	4	4	4	0	6	0	6	6	5	5	48
Fort Scott	40	0	4	4	4	4	0	6	0	6	6	0	5	79
Brown	0	4	4	4	4	4	0	6	0	6	6	5	5	48
Butler	35	4	4	4	4	4	6	6	6	6	6	0	0	85
Chase	35	0	4	4	4	4	0	0	0	6	6	0	5	68
Chautauqua	0	0	4	4	4	4	0	0	0	0	6	0	5	27
Cherokee	40	0	0	4	4	0	0	0	0	6	6	5	0	65
Cheyenne	0	4	4	4	4	0	0	6	0	6	6	5	5	44
Clark	0	4	4	4	4	4	0	0	0	6	6	5	5	42
Clay	0	4	4	4	0	4	0	6	6	6	6	5	5	50
Cloud	15	0	4	4	4	4	0	6	6	6	6	5	5	65
Coffey	0	0	4	4	4	4	0	0	6	6	6	0	5	39
Comanche	0	4	4	4	4	4	0	0	6	6	6	5	5	48
Cowley	40	4	4	4	4	4	0	0	6	6	6	5	5	88
Crawford, except	30	0	4	4	0	4	0	0	0	6	6	0	5	59
Pittsburg	25	0	4	4	4	0	0	0	6	6	6	0	5	60
Decatur	25	4	4	4	4	0	0	6	0	6	0	5	5	63
Dickinson	0	4	0	4	4	4	0	6	0	6	6	5	0	39
Doniphan	0	0	4	0	4	4	0	6	0	6	6	5	5	40
Douglas, except	0	0	4	4	4	4	0	0	0	0	6	5	5	32
Lawrence	0	0	4	4	4	0	0	0	0	6	6	0	5	29
Edwards	0	4	4	0	0	4	0	0	0	6	0	5	5	28
Elk	0	0	4	4	4	0	0	0	0	6	6	5	5	34
Ellis	15	0	4	0	4	0	0	0	0	6	6	5	5	45
Ellsworth	35	4	4	0	0	4	0	0	6	0	6	5	5	69
Finney	5	0	4	4	4	4	6	6	0	6	6	0	5	50
Ford	15	0	4	4	4	0	0	0	6	6	6	0	5	50
Franklin	0	4	4	4	0	0	0	6	0	6	6	5	5	40
Geary	40	4	4	4	4	4	0	0	6	6	6	5	5	88
Gove	0	0	4	4	4	0	0	0	6	6	0	0	5	29
Graham	0	4	4	4	4	0	0	6	6	6	6	5	5	50
Grant	0	0	4	4	4	4	0	6	0	6	0	0	5	33
Gray	0	4	4	0	4	0	0	6	6	6	6	5	5	46
Greeley	0	4	4	4	4	4	0	6	0	0	0	5	5	36
Greenwood	25	4	0	4	4	4	0	6	6	6	6	5	0	70
Hamilton	0	4	4	4	4	4	0	0	0	6	6	5	5	42
Harper	0	0	4	0	0	0	0	0	0	6	6	0	5	21
Harvey	0	0	4	4	4	4	0	6	6	6	6	5	5	50
Haskell	0	0	4	4	4	4	0	6	6	6	6	0	5	45
Hodgeman	0	4	4	4	4	4	0	0	6	6	6	5	5	48
Jackson	0	4	4	0	4	0	0	0	0	6	6	5	5	34
Jefferson	40	4	4	4	4	4	0	6	0	6	6	5	5	88
Jewell	15	4	4	4	0	4	0	6	0	6	6	5	5	59
Johnson	0	0	4	0	4	0	0	0	0	6	6	0	5	25
Kearny	0	4	4	4	4	4	0	0	0	6	0	5	5	36
Kingman	0	0	4	4	4	0	0	0	0	6	6	5	5	34
Kiowa	0	4	4	4	4	0	0	0	6	6	6	5	5	44
Labette, except	0	0	0	4	4	4	6	6	0	6	6	0	0	36
Parsons	35	4	4	4	0	4	0	6	0	6	6	5	5	79
Lane	0	4	4	4	4	0	0	0	6	0	6	5	5	38
Leavenworth, except	0	4	4	4	4	0	0	0	0	6	6	5	5	38
Leavenworth city	40	4	4	4	0	0	0	0	6	6	6	5	5	80
Lincoln	25	4	4	4	4	4	0	6	0	6	0	5	5	67
Linn	30	0	0	0	0	4	0	6	0	6	6	5	0	57
Logan	0	4	4	4	4	4	0	6	0	6	0	5	5	42
Lyon	0	4	4	4	4	4	0	0	6	6	6	4	5	48
Marion	35	0	0	4	4	4	0	6	0	6	6	5	0	70

MORBIDITY AND FATALITY SCORES—CONCLUDED.

COUNTIES AND CITIES.	Does County Health Officer report regularly..........	Fatality rate.					Morbidity rate.					Low typhoid death rate (below 10 per 100,000)...	Low smallpox death rate (below 1 per 100,000)...	Total............
		Typhoid.........	Smallpox.........	Measles.........	Scarlet fever........	Diphtheria.........	Typhoid.........	Smallpox.........	Measles.........	Scarlet fever........	Diphtheria.........			
Marshall	0	4	0	0	0	0	0	6	0	6	0	5	0	21
McPherson	0	4	4	4	0	0	0	0	0	6	0	5	5	28
Meade	30	0	4	0	4	4	0	6	0	6	0	0	5	59
Miami	0	0	4	4	0	4	6	6	0	6	6	0	5	41
Mitchell	0	0	4	4	4	4	0	6	6	6	0	5	5	44
Montgomery, except	40	0	0	0	4	0	0	0	0	6	6	5	0	61
Coffeyville	40	0	4	4	4	4	6	0	0	6	6	0	5	79
Morris	20	4	4	4	4	0	0	0	6	6	6	5	5	64
Morton	0	4	4	0	4	4	6	0	0	6	6	5	5	44
Nemaha	0	4	4	4	4	0	0	0	0	6	6	5	5	38
Neosho	40	0	0	0	4	0	0	0	6	6	6	0	0	62
Ness	0	0	4	0	0	0	6	6	6	6	6	0	5	39
Norton	0	0	4	0	0	0	6	6	0	6	0	0	5	27
Osage	0	4	4	4	4	0	0	0	0	6	6	5	5	38
Osborne	40	4	4	0	4	4	0	6	6	6	0	5	5	84
Ottawa	10	4	0	4	4	4	0	6	6	6	6	5	0	55
Pawnee	0	0	4	4	4	0	0	6	6	6	6	0	5	41
Phillips	5	4	4	4	4	0	0	6	6	6	0	5	5	49
Pottawatomie	0	0	4	4	4	4	0	0	6	6	6	5	5	44
Pratt	5	4	4	4	4	4	0	0	6	6	6	5	5	53
Rawlins	0	4	4	0	4	4	6	6	0	6	0	5	5	44
Reno, except	20	0	4	0	4	0	0	6	0	6	6	5	5	56
Hutchinson	35	4	4	4	4	4	0	6	6	6	6	5	5	89
Republic	0	0	4	4	4	4	0	6	0	6	6	0	5	39
Rice	0	0	4	4	4	4	0	6	0	6	6	0	5	39
Riley	25	4	4	4	0	4	0	0	6	6	6	5	5	69
Rooks	0	0	4	0	0	4	0	6	6	6	6	5	5	42
Rush	0	0	0	4	0	4	0	6	6	6	0	0	0	26
Russell	25	0	0	0	4	0	0	6	6	6	6	5	0	58
Saline, except	35	4	4	0	0	4	0	6	0	6	6	5	5	75
Salina	40	0	4	0	0	0	0	6	6	6	6	5	5	78
Scott	0	4	4	4	4	0	0	6	0	6	6	5	5	44
Sedgwick, except	0	4	4	0	4	0	0	0	0	6	6	5	5	34
Wichita	40	4	4	4	4	4	6	6	6	6	6	0	5	95
Seward	40	4	4	4	4	4	0	6	0	6	6	5	5	88
Shawnee, except	40	4	4	4	4	4	0	0	0	6	6	5	5	82
Topeka	40	0	4	0	4	4	0	6	6	6	6	5	5	86
Sheridan	15	4	4	4	0	4	0	6	6	6	0	5	5	59
Sherman	10	4	4	4	4	4	0	6	0	6	0	5	5	52
Smith	25	0	4	4	4	4	0	6	6	6	0	0	5	64
Stafford	0	0	4	4	4	4	0	6	6	6	6	0	5	45
Stanton	0	4	4	4	4	4	0	6	0	0	0	5	5	36
Stevens	0	4	4	4	4	4	0	0	6	0	0	5	5	36
Sumner	40	4	4	4	4	4	0	0	6	6	6	5	5	88
Thomas	0	4	4	4	0	4	0	6	0	0	0	5	5	32
Trego	0	4	4	4	4	0	0	0	0	6	0	5	5	32
Wabaunsee	0	0	4	0	4	4	0	6	6	6	6	5	5	46
Wallace	0	4	4	4	4	4	0	6	0	0	0	5	5	36
Washington	0	4	4	4	0	0	0	0	0	6	6	5	5	34
Wichita	0	4	4	4	4	4	0	0	0	0	0	5	5	30
Wilson	30	0	4	4	4	4	0	6	6	6	6	0	5	75
Woodson	0	0	4	4	4	4	0	0	6	6	6	0	5	39
Wyandotte, except	0	4	4	4	0	0	0	0	0	0	6	5	5	28
Kansas City	5	0	0	4	4	0	0	6	0	6	6	5	0	40

An Irish lady, widely known in society, contributed to the gaity of nations the other evening by dashing into the nursery and reproving her eldest born in manner following:

"I just wish your father was at home some evening to see how you behave when he is out."

Report of Division of Water and Sewage, February, 1922.

Albert H. Jewell, *Chief.*

Permits Issued or Refused for Waterworks and Sewerage.

Date.	*Place.*	*Nature of improvement.*
Feb. 2	Hoxie	Sewer system.
Feb. 2	Topeka	Sewer extensions (dist. No. 52).
Feb. 18	Topeka	Sewer extensions (dist. No. 53).
Feb. 24	McCracken	Water improvement.
Feb. 28	Columbus	Sewer extensions.
Feb. 28	Salina	Sewer extensions.

Inspections Made.

Date.	*Place.*	*Nature of improvement.*
Feb. 6	Bonner Springs	City water supply.
Feb. 6	Lansing	Sewer, Kansas State Prison, and water supply.
Feb. 7	Bucklin	Waterworks.
Feb. 7	Greensburg	Waterworks.
Feb. 7	Leavenworth	City water supply.
Feb. 8	Atchison	City water supply.
Feb. 8	Fowler	Waterworks.
Feb. 8	Meade	Waterworks.
Feb. 8	Minneola	Waterworks.
Feb. 8	Plains	Waterworks.
Feb. 9	Elkhart	Waterworks.
Feb. 9	Holton	City water supply and sewage disposal.
Feb. 9	Horton	City water supply and sewage disposal.
Feb. 9	Hugoton	Waterworks.
Feb. 9	Liberal	Waterworks.
Feb. 10	Ashland	Waterworks.
Feb. 10	Englewood	Waterworks.
Feb. 10	Protection	Waterworks.
Feb. 10	Valley Falls	City water supply and sewage-disposal plant and disposal of creamery wastes.
Feb. 11	Attica	Waterworks.
Feb. 11	Coldwater	Waterworks.
Feb. 11	Harper	Waterworks and sewage disposal.
Feb. 11	Medicine Lodge	Waterworks.
Feb. 11	Oskaloosa	City water supply.
Feb. 13	Anthony	Waterworks.
Feb. 13	Conway Springs	Waterworks.
Feb. 13	Kiowa	Waterworks.
Feb. 14	Argonia	Waterworks.
Feb. 15	Belle Plaine	Waterworks.
Feb. 15	Udall	Waterworks.
Feb. 16	Burden	Waterworks.
Feb. 16	Girard	Sewage disposal.
Feb. 16	Pittsburg	Stream pollution.
Feb. 17	Clearwater	Waterworks.
Feb. 17	Parsons	Stream pollution.
Feb. 21	Tonganoxie	Waterworks.
Feb. 23	Ellsworth	Water-supply investigation.
Feb. 23	Little River	Water inspection.
Feb. 23	St. Marys	Waterworks.
Feb. 24	Canton	Water inspection.
Feb. 24	Wamego	Waterworks.
Feb. 24	Hope	Water inspection.
Feb. 24	Junction City	Waterworks.
Feb. 25	Council Grove	Stream pollution investigation.
Feb. 25	Herington	Water inspection.
Feb. 25	Chapman	Waterworks.
Feb. 25	Enterprise	Waterworks.
Feb. 25	Abilene	Waterworks.
Feb. 25	Salina	Waterworks.
Feb. 26	Lindsborg	Waterworks.
Feb. 26	Marquette	Waterworks.
Feb. 26	Holyrood	Waterworks.
Feb. 27	Ellsworth	Waterworks.
Feb. 27	Lincoln Center	Waterworks.
Feb. 27	Bennington	Waterworks.
Feb. 27	Minneapolis	Waterworks.
Feb. 27	Delphos	Waterworks.
Feb. 27	Glasco	Waterworks.

Date.	*Place.*	*Nature of improvement.*
Feb. 27	Goodland	City water supply. City sewage-disposal plant. C. R. I. & P. R. R. supply.
Feb. 28	St. Francis	City water supply. C. B. & Q. private supply.
Feb. 28	Simpson	Waterworks.
Feb. 28	Beloit	Waterworks.
Feb. 28	Jamestown	Waterworks.
Feb. 28	Concordia	Waterworks.
Feb. 28	Clyde	Waterworks.
Feb. 28	Clifton	Waterworks.

Plans or preliminary reports have been received or conferences have been held with municipal authorities for new work at the following places:

Ellsworth	Additional water supply.
St. Francis	Sewer system.
Lawrence	Water improvement.
Herington	Water improvement.
Highland	Water improvement.
Howard	Water filtration, sewers and sewage disposal.
Colony	Waterworks.
Moline	Sewerage.
Sterling	Sewerage.
Topeka	State Hospital, water improvement.
Utica	Water supply.
Valley Falls	Additional water supply.
Wathena	Water supply and sewerage.
Parsons	Water filtration.
Neodesha	Water purification improvements.
Pratt	Water improvements.
Atchison	Mausoleum.
Kansas City	Mausoleum.
Atchison	Swimming pool.
Manhattan	Swimming pool.
Horton	Water improvements.
Ellinwood	Sewers.
Wa Keeney	Sewers.

Record of analyses made in water and sewage laboratory at Lawrence during February, 1922.

	Bact.	*Chem.*	*Miscel.*
City supply	540	16	..
Bottled water	4	2	..
Private supplies	18	1	..
Railroad supplies	24	..	..
Ice	51	..	..
Sand	..	..	1
Chemical	..	1	..
Survey	248	..	..
Totals	885	20	1—906

Licenses Issued.

Date.	*Place.*	*Person or firm and purpose.*
Feb. 15	Atchison	Chicago, Burlington & Quincy. City supply.
Feb. 15	Atchison	Missouri Pacific. City supply.
Feb. 15	Atchison	Chicago, Rock Island & Pacific. City supply.
Feb. 15	Atchison	Atchison, Topeka & Santa Fe. City supply.
Feb. 15	Bonner Springs	Kansas City, Kaw Valley & Interurban. City supply.
Feb. 15	Horton	Chicago, Rock Island & Pacific. Private supply.
Feb. 15	Leavenworth	Leavenworth & Topeka. City supply.
Feb. 15	Leavenworth	Chicago, Rock Island & Pacific. City supply.
Feb. 15	Leavenworth	Atchison, Topeka & Santa Fe. City supply.
Feb. 15	Leavenworth	Union Pacific. City supply.
Feb. 15	Plainville	Union Pacific. Private supply.
Feb. 16	Anthony	Anthony Salt Company. Manufactured ice.
Feb. 16	Cherryvale	Watkins Bros. Manufactured ice.
Feb. 16	Concordia	Concordia Ice & C. S. Co. Manufactured ice.
Feb. 11	Cottonwood Falls	Home Light & Produce Co. Manufactured ice.
Feb. 11	Dodge City	Electric Service Co. Manufactured ice.
Feb. 16	Elkhart	Elkhart Ice Plant. Manufactured ice.
Feb. 10	Emporia	Emporia Ice & C. S. Co. Manufactured ice.
Feb. 10	Fort Scott	Fort Scott Ice Mfg. Co. Manufactured ice.

Date.	*Place.*	*Person or firm and purpose.*
Feb. 10	Fort Scott	O'Connor & Hamlin. Manufactured ice.
Feb. 11	Herington	Herington Ice Co. Manufactured ice.
Feb. 11	Hiawatha	Hiawatha Light, Power & Ice Co. Manufactured ice.
Feb. 16	Hutchinson	Carey Salt Co. Manufactured ice.
Feb. 11	Independence	Crystal Ice & Fuel Co. Manufactured ice.
Feb. 16	Kansas City	Armour & Co. Manufactured ice.
Feb. 16	Kiowa	Kiowa Ice & Storage Co. Manufactured ice.
Feb. 4	Newton	Newton Ice & St. Co. Manufactured ice.
Feb. 11	Topeka	Seymour Packing Co. Manufactured ice.
Feb. 11	Topeka	Chas. Wolff Packing Co. Manufactured ice.
Feb. 11	Wichita	Jacob Dold Packing Co. Manufactured ice.
Feb. 11	Wichita	Steffen-Bretch Ice & S. Co. Manufactured ice.
Feb. 16	Americus	Winters & Reginold. Natural ice.
Feb. 16	Beloit	Geo. W. Duley & Son. Natural ice.
Feb. 11	Downs	Artificial Ice & S. Co. Natural ice.
Feb. 4	Dunlap	Farmers Union Store. Natural ice.
Feb. 4	Effingham	D. Richter. Natural ice.
Feb. 4	Eskridge	Parmiter Bros. Natural ice.
Feb. 11	Everest	R. H. Rosenhoover. Natural ice.
Feb. 4	Green	J. R. Bushnell. Natural ice.
Feb. 16	Gypsum	J. W. Darling. Natural ice.
Feb. 4	Long Island	Al Skelton. Natural ice.
Feb. 4	Louisville	H. M. Harrison. Natural ice.
Feb. 11	Matfield Green	J. F. Newell. Natural ice.
Feb. 4	Morganville	B. H. Ruffner. Natural ice.
Feb. 11	Osawkie	Louis Puderbaugh. Natural ice.
Feb. 11	Phillipsburg	H. C. Townsend. Natural ice.
Feb. 4	Randolph	Charles Heller. Natural ice.
Feb. 4	Strong City	W. W. Harvey. Natural ice.
Feb. 4	Troy	Joe Hayton. Natural ice.
Feb. 4	Waterville	W. R. Summers. Natural ice.
Feb. 16	White Cloud	C. H. Lupold & Co. Natural ice.
Feb. 11	Williamsburg	D. Fogle Merc. Co. Natural ice.

Obesity Leads to Diabetes.

Doctor Joslin, an eminent specialist of Boston, has recently called attention to the enormous increase in the number of diabetics in this country within recent years. The death rate, as he shows, has climbed from 10 per 100,000 to 18. The ratio in Boston has been even greater, the death rate having risen from 14 to 26.

He tells us that there are in the United States probably more than half a million diabetics. He has made a careful analysis of a thousand cases of diabetes with reference to the probable cause of the disease, and has reached the conclusion that overfeeding is the principal reason. He finds that diabetes, in the great majority of cases, follows obesity; that it occurs most frequently among the well-to-do; that the tendency to this disease may be inherited, but is generally acquired; that it occurs more often in sedentary persons than those whose vocations are active.

Diabetes is very rare in thin people. Its occurrence becomes less and less likely with advancing years, unless there is an increase in weight above the normal. In Doctor Joslin's opinion, a person who is obese is at least twice as likely to suffer from diabetes as a person who is slightly underweight. At some ages overfat persons are forty times as likely to become diabetic as those who are underweight. Every overfat person is a candidate for diabetes.

When the disease is well established it can rarely be cured. On this account it is important to discover the first symptoms early. The very first trace of sugar found in the urine should lead to a thorough reform of the habits of eating, so that the disease may be checked at the outset. To accomplish this Doctor Joslin makes the very sensible suggestion that every person should have an examination of the urine made on each birthday.—*Good Health.*

Keeping Clean.

Should dirty people be compelled by law to be clean?

If this question were put squarely up to you, how would you answer it?

Of course, we are not talking altogether about people that habitually have dirty hands and bodies and who are not cleanly in their personal habits. We have more in mind those persons that, while they pay due attention to their personal appearance and cleanliness, are yet, in a sense, very dirty people. "Why are they dirty?" you may ask in some surprise.

Well, they are dirty because they contribute to community dirt. They do this, in many cases, because they are thoughtless, careless or indifferent as to community conditions. Because they have dirt and rubbish of their own making that they want to get rid of; and for the very laudable reason that they want their own immediate surroundings—that is, their own premises—clean, they dispose of their own dirt and rubbish in such a way that it becomes a contribution—their contribution, if you please—to the dirt and rubbish of the community in which they live.

It is in this way that community dirt and ugliness are created and maintained. So, you see, no doubt, the point we are trying to make, which is this: That before a community can become dirty, ugly, unsightly and dangerous, the people in that community, or at least quite a lot of them, are dirty, or otherwise the locality in which they live would be clean. Do you get the point?

Clean people will naturally have clean premises and clean surroundings. And if they are thoroughly and conscientiously clean they will not dispose of their own dirt and refuse in such a way as to add to the dirty and unsightly character of their community. Such people will not use the nearest vacant lot or alley as a dumping ground for the cast-off rubbish that they do not want. In other words, they will not help to make the vacant lots or alleys in their vicinity eyesores and plague spots in their communities. They will carefully gather up their waste material of every kind and place it in proper receptacles that it may be removed by those whose business it is to keep the city free from dirt and rubbish of every kind. Nothing is clearer, then, than the fact that clean people will have clean communities and that dirty people will have dirty communities. So, then, if a town is dirty, ugly and unsightly, you can't blame the town; you must blame the people. This is true for the simple reason that before a town or community can be dirty the people have to be dirty. People that are really clean will have clean back yards as well as clean front yards. So that, after all, a dirty town or a dirty community means just one thing, and that is, dirty people.

Now that you have our idea of dirty people that with their dirty, careless habits help to make our communities dirty and dangerous places to live in, how would you answer the question asked at the beginning of this acticle?

As the old darky said, "A chicken am de mos' usefullest animule dere be. Yo can eat him befoah he am bohn an' aftah he am dead."

Report of Public Health Laboratory for February, 1922.

	February.		*January.*	
1. Complement fixation test for syphilis:				
Blood specimens from physicians:				
Positive	80		106	
Negative	309		347	
Doubtful	20		46	
Unsatisfactory	13		20	
Totals	——	422	——	519
Blood specimens from Lansing:				
Positive	34		20	
Negative	76		46	
Doubtful	10		10	
Unsatisfactory	1		2	
Totals	——	121	——	78
Spinal fluid from physicians:				
Positive	2		6	
Negative	6		5	
Totals	——	8	——	11
Spinal fluids from Lansing:				
Positive	0		0	
Negative	0		1	
Totals	——	0	——	1
2. Globulin test—spinal fluid:				
Positive	6		7	
Negative	2		2	
Totals	——	8	——	9
3. Examination of sputum for tubercle bacilli:				
Positive	13		10	
Negative	97		95	
Unsatisfactory	2		4	
Totals	——	112	——	109
4. Examination of cultures for diphtheria bacilli:				
Positive	41		91	
Negative	663		594	
No growth	20		142	
Unsatisfactory	0		1	
Totals	——	724	——	828
5. Examination of smears for gonococci:				
From physicians:				
Positive	9		9	
Negative	29		44	
Unsatisfactory	2		1	
Totals	——	40	——	54
From Lansing:				
Positive	3		4	
Negative	75		57	
Totals	——	78	——	61
6. Examination of blood—Widal test for typhoid:				
Positive	4		2	
Negative	2		14	
Unsatisfactory	1		1	
Totals	——	7	——	17
7. Stool cultures for typhoid:				
Positive	0		0	
Negative	0		1	
Totals	——	0	——	1
8. Miscellaneous examinations:				
Blood smears for malaria	1		....	
Smear for tuberculosis	1		....	
Miscellaneous smears	2		....	
Stomach secretion for tuberculosis	1		....	
Pus for culture	2		....	
Urine for bacterial examination	2		....	
Brush bristles for anthrax	2		....	
Blood culture	1		....	
Spinal fluid culture	1		....	
Animal heads for rabies (negative)	2		....	
Totals	——	15	——	25
Totals for month		1,535		1,713

Judge: "The police say that you and your wife had some words."
Prisoner: "I had some, Judge, but I didn't get a chance to use them."

Why Folks Leave Home.

Many years ago someone who had consumption dropped his work in a factory, left his worries behind him, got into a bed in the rear end of a comfortable wagon and rode in the open air all the way to the Southwest.

He got well.

Ever since then folks in advanced stages of consumption have got the habit of spending their last few dollars on a railroad ticket to the Southwest, expecting that then, when they get to that glorious air "out there," they can go right to work to earn a living and be well.

They mostly die.

You can get cured in your home state better than anywhere else in the world.

The cure comes from—

1. Freedom from work.
2. Freedom from worry.
3. Rest in the open air.
4. Good, nourishing food.
5. Good cheer, happiness, the things that build up.

Colorado says:

"For the best interests of those tuberculous who have no funds, their migration to the West should be checked. Too often they leave their best opportunities for care behind them, and, sacrificing their all, start out on the quest for health, which, as we know, in almost every instance ends in death."

California says:

"The State Board of Health warns you because it wishes to spare you homesickness and suffering from financial strain."

The Surgeon General, U. S. P. H. S., says:

"The belief which prevailed years ago in the specific virtues of certain climates, particularly that of the arid Southwest, is now known to have been wrong."

Kansas says:

"There is no better air than Kansas air. Stay here and be cured."

Tenderfoot: Why do they have knots on the ocean instead of miles?

First-class scout: Well, you see they couldn't have the ocean tide if there were no knots.

"Rastus, how is it you have given up going to church?" asked Pastor Brown.

"Well, sah," replied Rastus, "it's dis way. I likes to take an active part, an' I used to pass de collection basket, but dey's give de job to Brotdah Green, who jest returned from ovah thai-ah."

"In recognition of his heroic service, I suppose?"

"No, sah. I reckon he got dat job in reco'nition o' his having lost one o' his hands."—*Argonaut.*

My Auto, 'Tis of Thee.

My auto, 'tis of thee, short cut to poverty,
Of thee I chant.
I blew a pile of dough on you two years ago
And now you refuse to go
Or won't or can't.

Through town and countryside, you were my joy and pride,
A happy day.
I love thy gaudy hue, the nice white tires so new,
But now you're down and through,
In every way.

To thee, old rattletrap, came many bumps and knocks,
For thee I grieve.
Badly thy top is torn, frayed are thy seats and worn,
A whooping affects thy horn,
I do believe.

Thy motor has the grip, thy spark plug has the pip,
And woe is thine.
I, too, have suffered chills, ague and kindred ills,
Endeavoring to pay my bills,
Since thou wert mine.

—*University Dist. Herald.*

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The highest worship of God is service to man.

Gold that buys health can never be ill spent.

The surest way to enrich a country is to conserve the health of its citizens.

An ounce of practical common-sense, up-to-date public-health legislation is worth a pound of the fictitious, visionary sort.

The infant mortality rate is the most sensitive index of community intelligence.

Defective teeth cause more physical deterioration to the human race than does alcohol.—*Oster.*

Good health exalteth a nation; but tuberculosis is a reproach to our civilization.

Walk uprightly in the ways of health and later thou wilt not pursue it with faltering step and a run-down body.

It is an honor for a man to cease from strife; but every fool will meddle with his health.

Three things doth the law of tuberculosis require of thee—rest, food and fresh air. Yea, four—will power.

Keep thy mind free from evil and thy body clean, for when the doctor X-rayeth thee he getteth much inside information.

And now hear ye, O my children, health is before thee who hath understanding; but the body of a fool grows weaker even unto the end.—*Selected.*

MORBIDITY REPORT FOR MARCH, 1922.

COUNTIES AND CITIES.	Tuberculosis......	Typhoid and Paratyphoid.....	Smallpox..........	Diphtheria........	Influenza..........	Scarlet Fever......	Measles (morbilli)..	German Measles (rubella).......	Whooping Cough...	Chickenpox........	Mumps...........	Pneumonia (all forms)........	Meningitis (epidemic).......	Poliomyelitis (epidemic).......	Other diseases (see Addenda)....
THE STATE.......	304	11	87	199	1752	335	37	3	100	283	70	318	5	0	208
Allen.............	8	0	0	0	21	5	1	0	1	0	0	6	0	0	0
Anderson.........	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
Atchison, except...	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0
Atchison city....	1	0	0	2	0	11	0	0	0	0	0	0	0	0	0
Barber...........	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0
Barton...........	0	0	2	1	4	5	0	0	0	0	15	1	0	0	0
Bourbon, except...	4	0	0	0	0	1	0	0	0	0	0	5	0	0	0
Fort Scott......	18	0	0	8	0	0	0	0	0	0	0	0	0	0	9
Brown............	2	0	0	2	45	2	0	0	0	0	0	0	0	0	0
Butler............	28	0	0	4	8	3	3	0	17	19	0	17	0	0	0
Chase............	0	0	0	1	33	0	0	0	0	0	0	0	0	0	0
Chautauqua*......	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cherokee.........	3	0	0	3	47	1	1	0	0	0	0	11	0	0	0
Cheyenne.........	0	0	0	0	0	3	0	0	0	0	0	0	0	0	1
Clark............	0	0	0	0	19	0	0	0	0	0	0	0	0	0	0
Clay.............	1	0	0	1	0	5	1	0	0	0	0	0	0	0	0
Cloud............	1	0	1	0	1	8	1	0	0	2	0	3	0	0	1
Coffey............	2	0	0	1	0	3	0	0	0	0	0	0	0	0	0
Comanche........	0	0	0	4	0	0	0	0	0	0	0	1	0	0	0
Cowley...........	4	0	0	1	30	2	0	0	7	3	0	6	0	0	4
Crawford, except..	13	0	0	2	35	2	1	0	0	1	0	13	0	0	3
Pittsburg.......	11	0	0	3	10	2	0	0	0	0	0	1	1	0	0
Decatur..........	1	0	0	0	73	3	0	0	0	1	0	3	0	0	0
Dickinson.........	0	0	0	1	28	2	0	0	0	2	0	1	0	0	1
Doniphan.........	1	0	0	5	15	4	0	0	0	1	0	2	0	0	2
Douglas, except...	0	0	0	2	2	3	0	0	0	1	0	8	0	0	0
Lawrence.......	8	0	1	2	9	3	2	0	0	39	0	0	0	0	1
Edwards..........	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0
Elk..............	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ellis.............	0	0	0	3	0	3	0	0	0	5	0	0	0	0	1
Ellsworth.........	0	0	0	1	24	0	0	0	0	0	0	8	0	0	1
Finney...........	0	0	0	0	1	2	0	0	0	1	13	2	0	0	1
Ford.............	5	0	0	2	250	11	0	0	36	15	1	5	0	0	0
Franklin..........	0	0	0	6	0	7	0	0	0	0	0	4	0	0	0
Geary............	0	0	0	0	0	1	0	0	0	5	0	1	0	0	2
Gove.............	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Graham..........	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0
Grant*...........	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gray.............	0	0	0	0	21	4	0	0	0	1	0	1	0	0	1
Greeley..........	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Greenwood........	1	0	0	1	15	1	0	0	0	0	0	12	0	0	0
Hamilton.........	0	0	0	0	6	0	0	0	0	0	1	0	0	0	0
Harper...........	0	0	0	4	4	4	0	0	0	0	0	0	0	0	0
Harvey...........	2	0	0	2	0	6	0	0	0	0	0	0	0	0	3
Haskell...........	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0
Hodgeman........	0	0	0	0	0	5	0	0	0	0	0	1	0	0	0
Jackson..........	1	0	0	0	0	4	0	0	0	0	0	0	0	0	0
Jefferson.........	1	0	0	0	1	5	0	0	0	0	0	3	0	0	1
Jewell............	0	0	0	0	136	6	0	0	0	0	0	1	0	0	0
Johnson..........	2	0	0	5†	1	1	0	0	0	0	1	2	0	0	0
Kearny...........	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Kingman.........	1	0	0	1	36	2	0	0	0	0	0	3	0	0	0
Kiowa............	0	0	1	0	0	2	0	0	0	0	0	0	0	0	0
Labette, except....	1	0	15	0	1	2	0	0	0	0	0	0	0	0	0
Parsons.........	5	0	0	2	1	0	0	0	0	2	0	5	0	0	6
Lane.............	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Leavenw'th, except	3	0	0	1	0	1	0	0	1	0	0	0	0	0	0
Leavenworth city	1	0	1	3	0	3	2	0	0	0	0	1	0	0	2
Lincoln...........	1	0	0	3	17	2	1	0	0	1	0	3	0	0	1
Linn.............	8	0	2	4	78	3	0	0	0	0	0	3	0	0	1
Logan............	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lyon.............	2	0	0	2	4	0	0	0	0	1	0	0	0	0	0
Marion...........	4	0	2	2	11	6	0	0	9	0	0	1	0	0	6
Marshall..........	0	2	0	0	10	6	0	0	6	0	0	0	0	0	1
McPherson........	5	0	2	4	0	0	4	0	0	0	0	3	0	0	0
Meade...........	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0

MORBIDITY REPORT FOR MARCH, 1922—Concluded.

COUNTIES AND CITIES.	Tuberculosis	Typhoid and Paratyphoid	Smallpox	Diphtheria	Influenza	Scarlet Fever	Measles (morbilli)	German Measles (rubella)	Whooping Cough	Chickenpox	Mumps	Pneumonia (all forms)	Meningitis (epidemic)	Poliomyelitis (epidemic)	Other diseases (see Addenda)
Miami	16	0	0	6	13	2	0	0	0	3	0	9	0	0	0
Mitchell	8	0	1	0	0	1	0	0	0	1	0	0	0	0	0
Montgomery, except	15	0	0	5	11	3	1	0	0	2	0	16	1	0	3
Coffeyville	1	0	1	5	0	3	0	0	0	0	0	4	0	0	2
Morris	4	0	0	2	25	0	0	0	0	0	0	0	0	0	0
Morton	0	0	0	1	5	0	0	0	0	0	0	1	0	0	0
Nemaha	1	0	0	0	0	7	0	0	0	0	0	1	0	0	0
Neosho	1	0	0	1	13	2	0	0	0	0	0	0	2	0	0
Ness	1	0	1	0	19	0	0	0	0	0	0	6	0	0	0
Norton	3	1	0	2	0	9	0	0	0	0	0	0	0	0	1
Osage	2	0	0	2	5	0	0	0	0	2	0	0	0	0	1
Osborne	1	0	0	0	19	3	0	0	0	17	0	0	0	0	0
Ottawa	0	0	0	0	0	3	0	0	0	1	0	1	0	0	0
Pawnee	0	0	1	4	0	3	0	0	1	0	3	7	0	0	0
Phillips	0	0	2	1	51	5	0	0	0	0	0	2	0	0	0
Pottawatomie	1	0	0	0	0	2	0	0	0	0	0	0	0	0	0
Pratt	2	0	1	2	0	0	0	0	0	1	0	0	0	0	0
Rawlins	0	0	0	1	184	0	9	1	0	0	0	3	0	0	0
Reno, except	3	1	2	0	6	1	0	0	0	1	0	2	0	0	1
Hutchinson	3	0	12	7	1	7	0	0	0	1	0	4	1	0	3
Republic	1	0	0	1	54	3	0	0	0	0	0	3	0	0	0
Rice	0	0	2	2	6	4	0	0	0	3	0	8	0	0	0
Riley	1	1	0	0	6	4	0	0	1	5	0	3	0	0	0
Rooks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rush	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0
Russell	1	0	5	3	0	2	0	0	0	0	0	0	0	0	0
Saline, except	2	0	0	0	0	2	0	0	0	1	0	0	0	0	0
Salina	1	0	1	1	4	2	0	0	0	0	0	0	0	0	1
Scott	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
Sedgwick, except	15	0	3	3	0	6	0	0	8	1	0	0	0	0	0
Wichita	8	0	14	8	1	31	0	0	5	32	2	25	0	0	26
Seward	0	0	0	0	0	0	0	0	2	5	1	0	0	0	0
Shawnee, except	2	0	0	1	7	3	0	0	0	3	0	0	0	0	3
Topeka	18	1	3	11	0	7	1	0	0	59	1	23	0	0	50
Sheridan	0	0	0	0	64	0	2	0	0	10	0	2	0	0	0
Sherman	1	0	1	6	0	3	0	0	0	0	0	3	0	0	0
Smith	1	0	0	7	36	8	0	0	0	0	0	0	0	0	0
Stafford	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stanton	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Stevens	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sumner	0	0	2	11	146	14	1	2	0	1	31	11	0	0	0
Thomas	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Trego	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0
Wabaunsee	0	0	0	2	3	1	0	0	0	1	0	2	0	0	0
Wallace	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
Washington	0	0	0	2	2	4	0	0	0	0	0	1	0	0	0
Wichita	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wilson	0	0	0	0	67	4	0	0	5	10	0	12	0	0	0
Woodson	0	0	0	0	2	3	0	0	0	0	0	4	0	0	0
Wyandotte, except	0	1	2	2	0	0	2	0	0	0	0	0	0	0	0
Kansas City	35	2	6	10	3	9	1	0	1	22	0	26	0	0	22
Rosedale	0	0	0	0	0	0	0	0	0	0	0	0	0	0	46

* Delinquent.

† Diphtheria carrier, Johnson, 1.

Other communicable diseases: Tetanus, 2; lethargic encephalitis, 2; septic sore throat, 2; chancroid, 3; erysipelas, 7; cancer, 7; ophthalmia neonatorum, 1; gonorrhœa, 84; syphilis, 100.

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A Dietary Study of Some Kansas Institutions Under Control of the State Board of Administration by E. H. S. Bailey.

For the past four or five years Professor Bailey of the University has been carrying on an investigation upon the quality, quantity and cost of the foods supplied to some of the state institutions, and the report has been recently published by the Board.

In most of these institutions the steward issues the food daily upon requisitions, and an accurate account is kept of the population, or those using the foods. From these reports it is possible to ascertain the daily, weekly or monthly consumption of food in these institutions.

One of two methods is in common use for making such studies: either have "feeding squads" to whom a determined amount of food is given; or from the total amount of food actually consumed by the group, calculate, in the conventional way, the per capita weight of the proteins, fats and carbohydrates, and the number of "calories" or units of energy furnished to each individual. The latter method has been followed here.

The study of the individual institutions extended over different periods; they were sometimes studies for several consecutive weeks, often over a period of six months, and in some cases for an entire year.

Without taking the space to give the details of the report upon each of the individual institutions, which covers seventy pages, the following comparative table may be quoted from the summary:

TABLE II.—Per capita comparison of the average dietaries of nine state institutions.

INSTITUTIONS.	Weight of food, pounds.	Protein, grams.	Fat, grams.	Carbohydrates, grams.	Calories.	Cost.	Cost per 1,000 calories.
Penitentiary, Lansing, July, 1917, to January, 1918	5.93	147	223	673	5,389	$0.395	$0.074
Industrial School Hutchinson, July, 1917, to March, 1918	4.49	122	108	639	4,032	.270	.068
Hospital, Osawatomie, July, 1917, to May, 1918	3.27	83	102	412	2,911	.219	.076
Industrial School, Beloit, September, 1917, to September, 1918,	4.58	91	106	430	3,113	.175	.058
Hospital, Topeka, October, 1917, to October, 1918	3.40	87	96	418	2,927	.236	.081
Hospital, Parsons, October, 1918, to October, 1919	4.70	101	109	481	3,355	.330	.099
Blind, Kansas City, January, 1919, to January, 1920	3.67	72	92	366	2,668	3.80	.115
Training School, Winfield, July, 1920, to January, 1921	4.87	96	100	470	3,188	.290	.091
Deaf, Olathe, September, 1920, to January, 1921	4.27	98	144	419	3,524	.377	.107

As there were over 6,700 people in all these institutions, an excellent opportunity to obtain *average figures* is afforded. The cost fluctuates with the peculiar changes in the food market during this period.

In the study of the dietary of these institutions the object has been to ascertain the facts, and then by constructive criticism assist the management to improve the conditions wherever possible without seriously increasing the cost. A comparison of these dietaries should be useful to the superintendents, and may help them to supply still more fully at each institution just the right proportions of the different foods adapted to the health and well-being of those who have been committed to the care of the state.

Report of Food Laboratory.

H. H. King, Ph. D., Director, K. S. A. C., Manhattan, Kan. H. Robert DeRose, M. S., Analyst.

COMMERCIAL ICE-CREAM POWDERS.

+ Indicates present; — indicates absent.

Sample No.	Retailer and address.	Manufacturer and address.	Gelatine.	Agar.	Starch.	Indian gum.	Dextrin.
60847	Olathe Creamery, Olathe	Beeler Mills, Pleasant Hill, Mo	—	—	—	+	—
60854	Annabel-Almen, McPherson	Wm. Rippey, Cincinnati, Ohio	—	+	—	—	+
60851	J. L. Johns, Manhattan	Warner Jenkins, St. Louis, Mo	—	+	Corn	+	+
60856	Belle Springs Creamery, Salina	Consumers Gelatine Co., St. Louis, Mo	—	—	—	+	+
60857	Belle Springs Creamery, Salina	B. Haller, Chicago, Ill	—	+	+	—	+
60858	Belle Springs Creamery, Salina	Preservaline Mfg. Co., Brooklyn, N. Y	—	+	—	Trace.	+
60862	Barry Bros., Salina	W. B. Woods, St. Louis, Mo	—	—	+	+	—
73085	Brown Co. Creamery, Hiawatha	B. Heller Co., Chicago, Ill	—	—	—	—	+
73086	C. M. Ware, Marysville	B. Heller & Co., Chicago, Ill	—	+	+	+	+
73087	C. N. Hurst, Marysville	Warner-Jenkinson Co., St. Louis, Mo	—	—	+	—	—
73088	J. F. Krotizinger, Seneca	W. B. Wood & Co., St. Louis, Mo	—	—	—	+	—
81400	J. R. Baker, Chanute	B. Heller & Co., Chicago, Ill	—	+	—	—	+
81404	A. Citti, Chanute	Hymes Bros. Co., New York, N. Y	—	—	—	+	—
81406	A. Gerharat & Co., Girard	Preservaline Mfg. Co., Brooklyn, N. Y	Trace.	—	—	+	—
81408	A. Rosrell, Girard	W. B. Wood Mfg. Co., St. Louis, Mo	—	—	—	+	+
93822	Steffen Bretch Ice Cream Co., Wichita	Preservaline Co., Brooklyn, N. Y	—	—	—	+	+
93823	Steffen Bretch Ice Cream Co., Wichita	Consumers Gelatine Co., St. Louis, Mo	—	—	—	—	+
*93829	Snyder Ice Cream Co., Wichita	A. Dogger & Co., Chicago, Ill	—	+	Corn.	—	—
93830	Snyder Ice Cream Co., Wichita	Consumers Gelatine Co., St. Louis, Mo	—	—	—	+	+
93832	Oscar Lamb, Wichita	S. W. Noggle Co., Kansas City, Mo	Trace.	+	—	+	+
294	New York Candy Kitchen, Topeka	Noggles Ice Cream Powder Co., Kansas City, Mo	—	—	—	+	—
295	Farmers Creamery Co., Topeka	W. B. Wood Mfg. Co., St. Louis, Mo	—	—	—	+	+

*No. 93829 contained the enzyme rennet. No attempt was made to determine the amount of gums in each sample; but to the identification of the gums used in each powder.

ANALYSIS OF SAUSAGE AND HAMBURGER.

H, Hamburger; S, sausage; +, present; —, absent.

Sample No.	Retailer and address.	Manufacturer and address.	Water.	Starch.	Nitrate.	SO2.	Color.
H 50636	E. C. Downing, Yates Center	E. C. Downing, Yates Center	66.76	—	—	....	....
H 50637	Shirley Bros., Buffalo	Shirley Bros., Buffalo	68.83	—	—	....	....
S 50638	Shirley Bros., Buffalo	Shirley Bros., Buffalo	42.99	—	—	....	....
H 50639	C. D. Clevenger, Buffalo	Shirley Bros., Buffalo	63.55	—	—	....	....
S 50640	C. D. Clevenger, Buffalo	Shirley Bros., Buffalo	48.57	—	—	....	....
S 50641	A. C. Rohrbaugh, Buffalo	Swift & Co., Kansas City	43.78	—	—	....	....
H 50642	Miller Bros., Fredonia	Miller Bros., Fredonia	66.79	—	+	....	....
S 50643	Miller Bros., Fredonia	Miller Bros., Fredonia	88.44	—	—	....	....
H 50644	J. Vogeli, Fredonia	J. Vogeli, Fredonia	62.18	—	—	....	....
S 50645	J. Vogeli, Fredonia	J. Vogeli, Fredonia	43.67	—	—	....	....
H 50646	Herron & Carlson, Fredonia	Herron & Carlson, Fredonia	61.87	—	+	....	....
S 50647	Herron & Carlson, Fredonia	Herron & Carlson, Fredonia	37.61	0.49	—	....	....
H 50648	J. H. Prentice, Neodesha	J. H. Prentice, Neodesha	69.39	4.00	+	....	....
S 50649	J. H. Prentice, Neodesha	J. H. Prentice, Neodesha	37.08	0.98	—	....	....
H 50650	C. W. Graves, Neodesha	C. W. Graves, Neodesha	69.70	0.46	—	....	....
S 50651	C. W. Graves, Neodesha	C. W. Graves, Neodesha	53.22	3.20	—	....	....
H 50652	S. M. Ellis, Neodesha	S. M. Ellis, Neodesha	61.80	2.29	+	....	....
S 50653	S. M. Ellis, Neodesha	S. M. Ellis, Neodesha	45.20	2.80	—	....	....
H 50654	A. H. & R. E. Davidson, Chanute	A. H. & R. E. Davidson, Chanute	70.49	—	—	....	....
S 50655	A. H. & R. E. Davidson, Chanute	A. H. & R. E. Davidson, Chanute	44.31	3.24	—	....	....
H 50656	C. W. Porter, Chanute	C. W. Porter, Chanute	62.73	—	—	....	....
S 50657	Hackney Bros. & Sons, Chanute	Hackney Bros. & Sons, Chanute	30.62	—	+	....	....
H 50658	Peoples Cooperative Store, Chanute	Peoples Cooperative Store, Chanute	39.65	—	—	....	....
S 50659	Peoples Cooperative Store, Chanute	Peoples Cooperative Store, Chanute	46.50	—	—	....	....
H 50660	H. J. & M. E. Boulware, Buffville	Armour & Co., Kansas City	64.50	—	—	—	—
S 50661	H. J. and M. E. Boulware, Buffville	Armour & Co., Kansas City	61.23	0.44	—	—	—
H 60873	Fisher Cash Store, Kansas City	Fisher Cash Store, Kansas City	63.45	—	—	+	+
S 60874	Fisher Cash Store, Kansas City	Fisher Cash Store, Kansas City	34.93	—	—	—	—
S 60875	L. Dulin, Kansas City	Armour & Co., Kansas City	57.81	—	—	—	—
S 60876	E. K. Wolf, Kansas City	....	48.80	1.12	—	+	—
S 60877	Rotert Grocery, Kansas City	....	46.61	—	—	—	—
H 60878	Rotert Grocery, Kansas City	....	62.38	—	—	+	+
S 60879	E. A. Tilman, Kansas City	....	55.59	1.40	—	—	—
H 60880	E. A. Tilman, Kansas City	....	66.90	—	—	—	+
H 60881	Consumers Meat Co., Kansas City	....	65.44	—	—	+	+
S 60882	Consumers Meat Co., Kansas City	....	53.94	0.57	—	+	—
S 60883	P. B. Ditts, Kansas City	....	45.95	0.08	—	—	+
H 60884	P. B. Ditts, Kansas City	....	66.01	—	—	+	+

EVAPORATED MILK.

Number.	Product.	Manufacturer.	Water.	Total solids.	Ash.	Fat.	Protein.	Lactose.	Fat in original milk.
60863	Evaporated milk	Lee Mercantile Co	74.07	25.93	1.37	8.12	6.53	Spoiled.	5.5
60865	Northfield evaporated milk	Northfield Milk Products Co	71.05	28.95	1.60	7.77	6.94	9.20	4.6
60866	Carnation milk	Carnation Milk Products Co	73.72	26.28	1.77	8.63	7.32	8.69	4.35
60867	Pickwick milk	Kansas City Wholesale Grocery	73.70	27.20	1.25	7.97	6.56	6.54	5.59
60868	Van Camp's milk	Van Camp Packing Co	71.41	28.59	.99	8.20	6.87	8.17	5.7
50869	Sego evaporated milk	Utah Condensed Milk Co	74.20	25.70	.95	7.76	7.17	8.06	5.5
60870	Red Cross milk	Mohawk Condensed Milk Co., New York	74.06	25.94	1.30	8.30	6.90	8.42	4.35
60872	Pet milk	Helvetia Milk Co	71.43	28.57	1.30	8.50	7.30	9.55	4.7
60871	Congress brand evaporated skimmed milk and cocoanut oil	Kansas City Wholesale Grocery Co., Kansas City, Mo	74.37	25.63	1.16	6.11	6.59	8.28	3.6

COMMERCIAL CEREAL PRODUCTS.

Retailer, Putman Manufacturing Co., Atchison.

Product.	Number.	Manufacturer and address.	Weight declared, in oz.	Weight found.	Moisture.	Protein.	Ash.	Protein in H2O extract.	Boiling test.		Color.	Grade of flour.
									H2O.	NaCL.		
Spaghetti	60981	Cleveland Macaroni Co., Cleveland, Ohio	5.00	4.95	14.20	12.96	1.31*	1.52	Firm.†	Firm.†	None.	Low.
Egg Noodles	60892	Cleveland Macaroni Co., Cleveland, Ohio	3.50	4.50	9.57	13.39	2.12*	4.38‡	Firm.	Firm.	None.	Low.
Egg Noodles	60893	Skinner Manufacturing Co., Omaha, Neb	4.00	4.40	10.36	14.25	1.18*	3.98‡	Firm.	Firm.	None.	Low.
Egg Noodles	60894	Sprague Warner, Chicago, Ill	8.00	7.89	10.43	13.39	2.79*	4.58‡	Firm.	Firm.	None.	Low.
Macaroni	60895	Sprague Warner, Chicago, Ill	12.00	11.96	9.82	12.29	0.68	2.10	Firm.	Firm.	None.	Low.
Spaghetti	60896	Sprague Warner, Chicago, Ill	12.00	12.19	9.42	13.99	0.81	1.37	Firm.	Firm.	None.	Low.
Macaroni	60897	Minnesota Macaroni Co., St. Paul, Minn	8.00	7.91	11.67	10.44	0.65	2.10	Firm.	Firm.	None.	Low.
Spaghetti	60898	Minnesota Macaroni Co., St. Paul, Minn	8.00	8.70	10.79	12.83	0.77	2.19	Firm.	Firm.	None.	Good.
Noodles	60899	Kansas City Macaroni Co., Kansas City, Mo	8.00	8.60	10.17	12.19	0.58	4.00‡	Firm.	Firm.	None.	Good.
Spaghetti	60900	Gooch Food Produce, Lincoln, Neb	7.00	7.60	9.51	14.80	1.05*	2.46	Firm.	Firm.	None.	Good.
Macaroni	60901	Gooch Food Produce, Lincoln, Neb	7.00	7.45	11.93	13.10	1.10*	3.28	Firm.	Firm.	None.	Low.

*Added salt.

†Made from semalina.

‡High total and high protein in water extract shows the presence of egg.

NOTE.—It will be noticed that some of the samples are a little under weight; not over one-tenth of an ounce, however. From the table it will be noticed that the products which are marked "egg products," as egg noodles, run high in total protein. They also run high in soluble protein, or protein in water extract, as compared with a product that does not contain egg at all. Thus a product high in total protein and protein in water extract indicates that protein has been added, which is no doubt the egg protein. It will also be noticed that most of the samples run high in ash. This indicates the addition of salt, and no doubt other products besides durum.

CATSUP.

Insp. No.	Brand.	Manufacturer.	Per cent of molds in fields.	Bacteria per c.c.
60885	Frendell catsup	Sprague, Warner & Co., Chicago	20	22,700,000
60886	Maple brand	Every Food Co., Chicago	30	46,000,000
60887	Libby's catsup	Libby McNeill & Libby, Chicago	24	15,600,000
60888	Symns	Symns Grocer Co., Atchison, Kan	28	28,400,000
60889	Council	Indian Packing Co., Chicago	20	19,900,000
60890	Veribest	Armour & Co., Chicago	26	36,000,000

Report of Division of Water and Sewage, March, 1922.

ALBERT H. JEWELL, Chief.

Permits Issued or Refused for Waterworks and Sewerage.

Date.	*Place.*	*Nature of improvement.*
Mar. 6	Howard	Water improvements.
Mar. 6	Howard	Sewer system.
Mar. 20	Wichita	Sewer extensions.
Mar. 23	Hoisington	Waterworks improvements.
Mar. 24	Valley Falls	Sewer extensions.
Mar. 29	Parsons	Water purification.
Mar. 30	Coffeyville	Sewer extensions.

Inspections Made.

Mar. 1	Belleville	City water supply and sewage-disposal plant.
Mar. 1	Munden	City water supply.
Mar. 1	Scandia	City water supply.
Mar. 1	Courtland	City water supply.
Mar. 1	Clay Center	Waterworks.
Mar. 2	Mankato	City water supply.
Mar. 2	Burr Oak	City water supply.
Mar. 2	Esbon	City water supply.
Mar. 2	Lebanon	City water supply.
Mar. 3	Norton	Special investigation for water supply State Tuberculosis Sanitarium. Conference; creamery wastes in city of Norton.
Mar. 4	Smith Center	City water supply and sewage-disposal plant.
Mar. 4	Kensington	City waterworks.
Mar. 9	Strong City	Water supply.
Mar. 9	Cottonwood Falls	Water supply.
Mar. 9	Peabody	Water supply.
Mar. 10	Wichita	Mausoleum (final inspection).
Mar. 13	Columbus	Operation of sewage-disposal plant. Special report.
Mar. 14	Arcadia	City water supply.
Mar. 15	Fort Scott	City water supply.
Mar. 15	Moran	City water supply.
Mar. 15	La Harpe	City water supply.
Mar. 16	La Cygne	City water supply.
Mar. 17	Pleasanton	City water supply.
Mar. 17	Mound City	City water supply.
Mar. 18	Olathe	City water supply.
Mar. 21	Syracuse	Water supply.
Mar. 21	Garden City	Water supply.
Mar. 21	Cimarron	Water supply.
Mar. 22	Dodge City	Water supply.
Mar. 22	Spearville	Water supply.
Mar. 23	Kinsley	Water supply.
Mar. 23	Larned	Water supply.
Mar. 23	Jetmore	Water supply.
Mar. 24	Larned	Water supply at State Hospital.
Mar. 27	Garrison Crossing	U. P. railroad private supply.
Mar. 27	Blue Rapids	City water supply.
Mar. 28	Marysville	Marysville water filtration plant.
Mar. 28	Hanover	City water supply.
Mar. 29	Washington	City filter plant and sewage disposal.

Mar. 29	Greenleaf	City water supply.
Mar. 29	Rosedale	Storm sewers.
Mar. 30	Waterville	City water supply.
Mar. 30	Frankfort	City water supply.
Mar. 30	Havensville	City water supply. Union Pacific private supply.
Mar. 30	Pratt (State Fishery)	Stream-pollution investigation.
Mar. 31	Onaga	City water supply and Union Pacific private supply.

Plans or preliminary reports have been received or conferences have been held with municipal authorities for new work at the following places:

St. Francis	Sewer system.
Lawrence	Water improvements.
Herington	Water improvements.
Highland	Water improvements.
Colony	Waterworks.
Moline	Sewerage.
Sterling	Sewerage.
Topeka	State Hospital, water improvement.
Utica	Water supply.
Wathena	Water supply and sewerage.
Neodesha	Water purification improvement.
Pratt	Water improvements.
Atchison	Mausoleum.
Kansas City	Mausoleum.
Atchison	Swimming pool.
Manhattan	Swimming pool.
Horton	Water improvements.
Ellinwood	Sewers.
Wa Keeney	Sewers.
Peabody	Sewer extensions.
Ellsworth	Additional water supply.
Almena	Sewerage and sewage-disposal plants.

Record of analyses made in Water and Sewage Laboratory at Lawrence during the month of March, 1922:

	Bact.	*Chem.*	*Miscel.*
City supply	608	9	..
Bottled waters	4	2	..
Private supplies	7	..	..
Railroad supplies	28	..	..
Ice	32	..	..
Miscellaneous	..	2	..
Survey	258	..	..
Chlorides	..	..	10
Sand	..	..	6
Totals	937	13	16—966

Licenses Issued.

Date.	*Place.*	*Person or firm and purpose.*
Mar. 28	Alton	Gorham Drug Company. Natural ice.
Mar. 22	Atwood	Piedalue & McGonigle. Manufactured ice.
Mar. 22	Barnes	Charles Burke. Natural ice.
Mar. 22	Beloit	Mulberry Ice Co. Natural ice.
Mar. 13	Clay Center	Starkweather & Wilson. Natural ice.
Mar. 13	Downs	W. F. Reed. Natural ice.
Mar. 13	Fostoria	George McCargar. Natural ice.
Mar. 28	Fredonia	Fredonia Lt. & Ice Co. Manufactured ice.
Mar. 22	Hill City	William Kobler. Natural ice.
Mar. 13	Humboldt	Humboldt Ice Co. Manufactured ice.
Mar. 13	Huron	John L. Snavely. Natural ice.
Mar. 13	Hutchinson	Hutchinson Ice Co. Manufactured ice.
Mar. 28	Kanona	J. P. Garrison. Natural ice.
Mar. 28	Kirwin	I. H. Hickman. Natural ice.
Mar. 13	Louisburg	Frank Hupp. Natural ice.
Mar. 13	Manhattan	Manhattan Gas and Elec. Co. Manufactured ice.
Mar. 22	Muscotah	Charles Ellson. Natural ice.
Mar. 22	Muscotah	Jesse E. Hubbard. Natural ice.
Mar. 13	Norton	Norton Ice Co. Manufactured ice.
Mar. 22	Oakhill	L. M. Cooney. Natural ice.
Mar. 13	Parsons	Federal Ice & Ref. Co. Manufactured ice.
Mar. 28	Paxico	J. C. Werner. Natural ice.
Mar. 28	Paxico	Wilt Brothers. Natural ice.
Mar. 13	Pratt	Pratt Ice & Coal Co. Manufactured ice.
Mar. 13	St. John	St. John Mills. Manufactured ice.
Mar. 13	Russell	Mrs. Eva A. Crofoot. Manufactured ice.

Mar. 13	Salina	Kansas Ice & Storage Co. Manufactured ice.
Mar. 13	Severance	W. W. Ward. Natural ice.
Mar. 22	Simpson	T. F. Wanzer. Natural ice.
Mar. 22	Smith Center	McBrien Ice Co. Natural ice.
Mar. 22	Topeka	Beatrice Creamery Co. Manufactured ice.
Mar. 13	Topeka	Railways Ice Co. Manufactured ice.
Mar. 22	Topeka	Topeka Pure Milk Co. Manufactured ice.
Mar. 13	Washington	Washington Ice Cr. Co. Manufactured ice.
Mar. 28	White City	Nels Nelson. Natural ice.

Report of Public Health Laboratory for March, 1922.

	March.		*February.*	
1. Complement fixation test for syphilis:				
Blood specimens from physicians:				
Positive	104		80	
Negative	347		309	
Doubtful	57		20	
Unsatisfactory	24		13	
Totals	——	532	——	422
Blood specimens from Lansing:				
Positive	40		34	
Negative	150		76	
Doubtful	35		10	
Unsatisfactory	6		1	
Totals	——	231	——	121
Spinal fluid from physicians:				
Positive	5		2	
Negative	14		6	
Doubtful	1		0	
Totals	——	20	——	8
2. Globulin test—spinal fluid:				
Positive	9		6	
Negative	8		2	
Totals	——	17	——	8
3. Examination of sputum for tubercle bacilli:				
Positive	18		13	
Negative	91		97	
Unsatisfactory	2		2	
Totals	——	111	——	112
4. Examination of cultures for diphtheria bacilli:				
Positive	26		41	
Negative	109		663	
No growth	15		20	
Unsatisfactory	..		..	
Totals	——	150	——	724
5. Examination of smears for gonococci:				
From physicians:				
Positive	6		9	
Negative	21		29	
Unsatisfactory	2		2	
Totals	——	29	——	40
From Lansing:				
Positive	9		3	
Negative	136		75	
Totals	——	145	——	78
6. Examination of blood—widal test for typhoid:				
Positive	1		4	
Negative	6		2	
Unsatisfactory	2		1	
Totals	——	9	——	7
7. Miscellaneous examinations:				
Swab for anthrax and tuberculosis	1		..	
Pus from abscess for tuberculosis	1		..	
Milk examination (chemical only)	18		..	
Culture from pus	4		..	
Dried smears for diphtheria	2		..	
Blood for differential count	3		..	
Swab for culture	1		..	
Spinal fluid for tuberculosis	1		..	
Colloidal gold	1		..	
Smear from throat	1		..	
Totals	——	33	——	15
Grand totals		1,277		1,535

LABORATORY ACTIVITIES.

The laboratory was called upon by the city health department, Topeka, to check up the chemical analysis of milk seized by the milk inspector on the suspicion that it was watered. The results of both laboratories were closely in agreement. The dairyman pleaded guilty to two charges preferred by the health department, that of selling milk below standard and of adulterating milk.

A mobile laboratory unit is now being assembled, and when completed will be one of the most up-to-date units in the country. This mobile unit will make it possible to carry on laboratory investigation in the field, and will undoubtedly be of great aid in the control of epidemics where laboratory help is essential.

Several charts illustrating laboratory activities and facilities have been prepared and will be displayed at the Health Institute in Kansas City, Kan.

Providence Not to Blame.

We often see resolutions of condolence beginning with: "Whereas, it has pleased an all-wise Providence to remove from the scene of his earthly suffering, and after a long and painful illness, our beloved friend, John Smith, whose death from typhoid fever occurred on the blank day of blank," etc. Some day in the not far distant future a death from typhoid, the king of filth diseases, will invoke a resolution from the mourning friends of the deceased which will read something like this:

"WHEREAS, Through the criminal neglect, carelessness and incompetency of our city officials, our water supply was permitted to be polluted with sewage and other dangerous filth, to the extent of making it unsafe to use; and

"WHEREAS, As a result of such criminal carelessness, neglect and incompetency of our city, our beloved friend and fellow townsman, John Smith, was killed with typhoid fever: therefore, be it

"*Resolved,* That we condemn the lack of care and vigilance shown by those whose business it is to safeguard the public health and whose negligence and disregard of their official duties have caused the death of our friend and brought sorrow to his family; and be it

"*Further resolved,* That we earnestly urge upon the public prosecutor that he take immediate steps to bring before the bar of justice the men who in their official capacities are responsible for the death of our friend and for the presence of a dangerous and loathsome disease in our city."

In the light of sanitary science we are becoming less and less inclined to place the blame on Providence for the sickness and suffering that are due to our ignorance or carelessness or both. God's agencies, if left to work unmolested, make the waters of our lakes and rivers pure. Men defile and pollute them. So when an epidemic of typhoid breaks out in a community and is traced to a polluted water supply, the resulting sickness and loss of human lives should not be charged against an all-wise and merciful Providence, but rather to an ignorant, unenlightened and careless community.

Lady (to maid): "Did you put in fresh water for the goldfish?"

Maid: "No, mum; they ain't drunk up what I gave them yesterday."

Report of Division of Water and Sewage, January, 1922.

ALBERT H. JEWELL, Chief.

Permits Issued or Refusal for Waterworks and Sewerage.

Date.	*Place.*	*Nature of improvement.*
Jan. 10	Humboldt	Sewers and waste disposal.
Jan. 16	Ottawa	Lateral sewer No. 74 (extension).
Jan. 21	Belpre	Water supply.
Jan. 25	Sabetha	Waterworks improvement.
Jan. 27	Oberlin	Sewers and sewage disposal.

Inspections Made.

Date.	*Place.*	*Nature of improvement.*
Jan. 6	Topeka	Contract letting, State Hospital pumps.
Jan. 18	Stockton	Reinspection Stockton sewerage system.
Jan. 24, 25, 26	Lawrence	Water plant inspection.
Jan. 26	Emporia	Water supply.

Final Inspections Made.

Date.	*Place.*	*Nature of improvement.*
Jan. 12-18	Osborne	Osborne filtration plant.
Jan. 19	Plainville	Sewer system and sewage disposal. City water supply. U. P. R. R. private water supply.

Plans or preliminary reports have been received or conferences have been held with municipal authorities for new work at the following places:

Marion	Conference on filtration plant.
Stockton	Conference on privately owned swimming pool.
Columbus	Sewer extension.
McCracken	Water improvement.
St. Francis	Sewer system.
Hoxie	Sewer system.
Lawrence	Water improvement.
Herington	Water improvement.
Highland	Water improvement.
Howard	Water filtration, sewers and sewage disposal.
Colony	Waterworks.
Salina	Sewage disposal.
Moline	Sewerage.
Sterling	Sewerage.
Topeka	State Hospital, water improvement.
Utica	Water supply.
Valley Falls	Additional water supply.
Wathena	Water supply and sewerage.
Parsons	Water filtration.
Neodesha	Water purification improvements.
Pratt	Water improvements.
Atchison	Mausoleum.
Kansas City	Mausoleum.
Topeka	Sewer extensions.

Record of analyses made in water and sewage laboratory at Lawrence, during January, 1922:

	Bact.	*Chem.*	*Miscel.*
City supply	485	6	..
Bottled waters	1	1	..
Private supplies	23	..	..
Railroad supplies	2	..	..
Ice	13	..	..
Ice supply	1	..	..
Sand	..	..	3
Chlorides	..	..	5
Bacteriological, miscellaneous	12	..	..
Chemical, miscellaneous	..	2	..
Survey	252	..	..
Totals	789	9	8—806

Report Public Health Laboratory for November, 1921.

	November.		*October.*	
1. Complement fixation test for syphilis:				
Blood specimens from physicians—				
Positive	75		104	
Negative	278		273	
Doubtful	34		42	
Unsatisfactory	18		8	
Totals	——	405	——	427
Blood specimens from Lansing—				
Positive	39		22	
Negative	206		63	
Doubtful	21		11	
Unsatisfactory	2		3	
Totals	——	268	——	99
Spinal fluids from physicians—				
Positive	6		7	
Negative	7		12	
Doubtful	0		2	
Unsatisfactory	2		0	
Totals	——	15	——	21
Spinal fluids from Lansing—				
Positive	0		2	
Negative	1		7	
Totals	——	1	——	9
2. Globulin test—spinal fluids:				
Positive	9		26	
Negative	4		4	
Totals	——	13	——	30
3. Examination of sputum for tubercle bacilli:				
Positive	22		32	
Negative	86		54	
Totals	——	108	——	86
4. Examination of cultures for diphtheria bacilli:				
Positive	598		508	
Negative	3,022		2,745	
No growth	302		251	
Unsatisfactory	0		2	
Totals	——	3,922	——	3,506
5. Examination of smears for gonococci:				
From physicians—				
Positive	5		4	
Negative	20		13	
Unsatisfactory	2		2	
Totals	——	27	——	19
From Lansing—				
Positive	4		8	
Negative	241		86	
Totals	——	245	——	94
6. Examination of blood—Widal test for typhoid:				
Positive	5		12	
Negative	19		36	
Unsatisfactory	1		0	
Totals	——	25	——	48
7. Stool cultures for typhoid:				
Negative	2		6	
Unsatisfactory	1		0	
Totals	——	3	——	6
8. Miscellaneous examinations:				
Animal heads for rabies	1		..	
Pus for bacteria	1		..	
Miscellaneous smears	2		..	
Blood smear	1		..	
Urine for tuberculosis (positive, 1; negative, 1)	2		..	
Urine, microscopic examination	2		..	
Autogenous vaccine	1		..	
Gastrointestinal parasites	1		..	
Totals	——	11	——	12
Grand totals		5,043		4,357

Tuberculosis is still the most generally prevalent of all diseases, but it is 37 per cent less deadly than in 1910.

Lessons in Citizenship.

Why should not the children be taught early to take part in civic work? The clean-up campaign which is now on furnishes a splendid opportunity for them to get some practical and valuable lessons in civic cleanliness, lessons which they will not forget and which will impress upon their minds the importance of having, so far as possible, clean and attractive surroundings. Permitting and encouraging the children to engage in civic work in the communities wherever they live tend to give them the vision that is needed to see the things that make for community discomfort and danger. For once it is clearly understood that the health of a section is good or bad as its sanitary condition is good or bad, the people of that section will see to it that their surroundings are made clean and kept so all the time.

The trouble with people who are content to live amid dirty and unsightly surroundings is that, having eyes they see not and having noses they smell not, the things that promote discomfort, disease and death. So what better way to give to the children the eyes that see and the noses that smell than to have them take an active part in the work of keeping their communities clean? When the children know that manure piles breed flies and that flies carry filth and disease wherever they go, they will help to get rid of the manure heaps and also help to keep flies out of their homes. There is no truer saying than that happiness depends upon health. And next as a factor in happiness is that of beautiful and attractive surroundings. Once get these fundamental truths firmly fixed in the child's intelligence and you have made him a valuable and indespensable aid in all forms of community welfare work.

The Germans have a saying to this effect: "What you want the people to do, teach it in the schools." This is sound common sense. It should suggest the importance of teaching in our public schools the fundamentals of good citizenship. And this work of training the children in civic usefulness can be carried on without interfering with their hours of recreation or with the successful prosecution of their regular studies in school. Indeed, most of the work they can do in looking after the sanitary conditions of their neighborhoods will take them out of doors, and if entered into with that zest and interest which children usually bring to their work, will prove as beneficial to both their physical and mental development as will any of the pastimes in which they are accustomed to engage.

At all events this idea of training the children along the lines of civic efficiency and usefulness is well worth considering. It is certainly fitting and proper that training in citizenship should be begun early if the highest and best conceptions of civic and community life are to be attained.

Judge: "The police say that you and your wife had some words."
Prisoner: "I had some, Judge, but I didn't get a chance to use them."

Tony's Smile.

I gotta da beega da feel in ma ches';
    But one—ah, you guessa! You taka da cake.
    Looka, see! Such beeg smila ess not'ing can make
Wot for eet ess fill up? Cannotta you guess?

I feel like to seeng w'en I yella "Bannan
An' da or'nge." Oh, I beena one ver' happy man!
Notta mon'y could giff sucha glad in da breas';
Seema laka som'time eet bus' open de ves'.

I bet you t'ink Tony ees loosa hees min'.
Or mebbe say eet ess too mucha red wine.
All right—I no care; I no goin' fer worry.
Gooda bye. Gaddap Cæsar, we gotta fer hurry.

Wot you say? You no maka da beeg onderstan'?
—Ho, ho! I forgetta you wanta bannan!
Yeh, Tony sure craze! Ain't I tell you we gotta
Beeg fine boy at our house? Yeh, me an' Carlotta.

—*W. C. C. in The Willow's Magazine.*

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OF THE
Kansas State Board of Health

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No. 5 MAY, 1922. XVIII

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The barber's college yell:
"Cut his lip, gash his jaw;
Leave his face—Raw! Raw! Raw!"
—New York Sun.

"Bat the rat."

The paper service is a safe service.

Food-contained vitamines are the best.

Make free use of the leafy vegetables.

A little roughness "in the food" has a new meaning.

Underweight does not necessarily mean malnutrition.

Whatever the fisherman is, he is not a "short-weight" artist.

Before taking your vacation be vaccinated against typhoid fever.

Rats destroy more chicks than all other animals combined! "Bat the rat!"

Ice should be used to refrigerate food in the ice box—not in your stomach.

It is estimated that there are 5,000,000 rats in Kansas with an economic loss of about $2 per year per rat! "Bat the rat!"

MORBIDITY REPORT FOR APRIL, 1922.

COUNTIES AND CITIES.	Tuberculosis	Typhoid and Paratyphoid	Smallpox	Diphtheria	Influenza	Scarlet Fever	Measles (morbilli)	German Measles (rubella)	Whooping Cough	Chickenpox	Mumps	Pneumonia (all forms)	Meningitis (epidemic)	Poliomyelitis (epidemic)	Other diseases (see Addenda)
THE STATE	161	22	75	148	91	204	44	2	100	267	80	103	3	0	295
Allen	7	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Anderson	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Atchison, except	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0
Atchison city	1	4	0	2	0	2	0	0	0	0	0	0	0	0	0
Barber	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0
Barton	1	0	2	0	1	4	0	0	3	4	4	0	0	0	0
Bourbon, except	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2
Fort Scott	1	0	0	3	0	2	0	0	1	0	0	0	0	0	12
Brown	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0
Butler	32	3	1	3	0	9	1	0	9	2	0	9	0	0	61
Chase	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0
Chautauqua*	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Cherokee	1	0	0	1	5	0	0	0	1	4	0	0	0	0	1
Cheyenne	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
Clark	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Clay	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Cloud	1	0	0	1	0	7	2	0	0	3	0	1	0	0	1
Coffey	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Comanche	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Cowley	2	1	0	2	0	0	0	0	16	1	1	0	0	0	2
Crawford, except	0	1	1	1	2	0	0	0	0	0	0	5	0	0	0
Pittsburg	1	0	0	3	0	0	0	0	0	1	0	0	0	0	1
Decatur	0	0	0	0	7	2	0	0	0	0	0	0	0	0	0
Dickinson	1	0	1	0	15	0	0	0	0	0	0	0	0	0	0
Doniphan	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0
Douglas, except	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0
Lawrence	1	0	0	0	0	1	0	0	0	25	0	0	0	0	1
Edwards	0	0	0	0	0	1	0	0	2	0	0	0	0	0	0
Elk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ellis	0	0	0	2	0	0	1	0	0	0	0	0	0	0	0
Ellsworth	0	0	0	4	1	0	0	0	7	4	0	1	0	0	2
Finney	0	0	0	0	0	5	5	0	0	0	24	0	0	0	0
Ford	2	0	0	2	3	0	0	0	16	8	2	1	0	0	1
Franklin	3	4	0	6	0	2	1	0	0	0	1	1	0	0	0
Geary	1	0	0	1	0	4	1	0	0	1	0	1	0	0	0
Gove	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Graham	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grant	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gray	0	0	0	1	0	1	0	0	0	1	9	1	0	0	0
Greeley	0	0	0	0	4	0	0	0	0	0	0	1	0	0	0
Greenwood	1	0	0	1	0	9	0	0	0	0	0	6	0	0	1
Hamilton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Harper	0	1	0	1	0	0	0	0	1	0	1	3	0	0	1
Harvey	2	0	1	10	1	6	0	0	0	0	0	0	0	0	1
Haskell	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hodgeman	0	0	0	0	0	1	1	0	0	0	0	1	0	0	0
Jackson	1	0	0	0	0	10	0	0	0	2	0	0	0	0	0
Jefferson	1	0	0	1	0	3	0	0	0	3	0	0	0	0	0
Jewell	9	0	0	2	0	6	0	0	4	0	0	0	0	0	0
Johnson	1	1	1	3	0	1	0	0	0	0	0	2	0	0	0
Kearny	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0
Kingman	1	0	0	4	0	4	0	0	0	2	0	1	0	0	1
Kiowa	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
Labette, except	0	0	0	1	0	0	0	0	0	0	0	0	0	0	13
Parsons	0	1	0	0	0	2	1	0	0	0	0	1	0	0	3
Lane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Leavenworth, exc't.	2	0	0	0	0	1	0	0	0	0	1	0	0	0	1
Leavenworth city,	2	0	7	1	0	0	0	0	0	5	1	0	0	0	1
Lincoln	0	0	0	3	0	1	0	0	0	6	0	3	0	0	0
Linn	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Logan	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0

MORBIDITY REPORT FOR APRIL, 1922—Concluded.

COUNTIES AND CITIES.	Tuberculosis	Typhoid and Paratyphoid	Smallpox	Diphtheria	Influenza	Scarlet Fever	Measles (morbilli)	German Measles (rubella)	Whooping Cough	Chickenpox	Mumps	Pneumonia (all forms)	Meningitis (epidemic)	Poliomyelitis (epidemic)	Other diseases (see Addenda)
Lyon	2	0	0	4	0	0	0	0	0	3	0	0	0	0	0
Marion	2	0	0	1	2	3	3	0	4	0	0	0	0	0	1
Marshall	1	0	0	0	1	3	0	0	0	1	0	0	0	0	0
McPherson	0	0	0	0	0	2	0	0	0	0	0	1	0	0	0
Meade	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Miami	3	0	0	2	0	1	0	0	0	0	0	3	0	0	1
Mitchell	2	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Montgomery, exc't.	3	0	0	5	2	1	0	0	0	0	1	3	0	0	1
Coffeyville	0	0	2	1	1	1	0	0	0	0	1	0	0	0	1
Morris	1	0	0	1	0	2	0	0	0	0	0	0	0	0	0
Morton	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0
Nemaha	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Neosho	1	0	0	2	0	1	0	0	0	2	0	1	0	0	0
Ness	0	0	1	0	0	2	2	0	0	0	0	0	0	0	0
Norton	5	0	0	0	0	2	0	0	0	0	0	0	0	0	0
Osage	13	0	0	1	0	1	0	0	0	6	0	1	0	0	0
Osborne	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0
Ottawa	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0
Pawnee	0	0	0	0	0	0	0	0	2	2	0	2	0	0	3
Phillips	2	0	1	2	0	2	1	0	0	0	0	0	2	0	0
Pottawatomie	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Pratt	2	0	7	0	0	1	2	0	0	0	0	0	0	0	0
Rawlins	0	0	0	1	16	1	1	0	0	1	0	1	0	0	0
Reno, except	1	0	1	1	0	1	1	0	0	0	0	1	0	0	1
Hutchinson	1	0	8	5	0	2	1	0	0	1	0	7	0	0	13
Republic	2	0	0	0	1	2	0	0	0	0	0	0	0	0	3
Rice	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Riley	0	0	0	0	0	2	0	0	0	13	1	0	0	0	1
Rooks	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
Rush*	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Russell	0	0	1	3	0	2	1	0	0	0	0	0	0	0	0
Saline, except	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
Salina	0	0	1	3	0	1	0	0	0	5	0	1	0	0	0
Scott	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sedgwick, except	0	0	0	4	0	8	1	0	0	2	0	0	0	0	1
Wichita	9	1	19	8	0	27	10	2	25	61	0	5	1	0	53
Seward	0	0	0	1	1	0	0	0	1	0	2	0	0	0	0
Shawnee, except	0	1	0	3	0	1	0	0	0	0	0	1	0	0	3
Topeka	10	0	3	12	0	7	2	0	6	55	1	13	0	0	20
Sheridan	0	0	0	0	0	0	0	0	0	3	0	1	0	0	0
Sherman	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0
Smith	2	0	0	1	1	3	0	0	0	0	0	1	0	0	0
Stafford	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0
Stanton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stevens	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sumner	2	0	0	10	2	7	0	0	0	4	30	2	0	0	2
Thomas*	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Trego	0	0	0	0	0	3	0	0	0	5	0	0	0	0	0
Wabaunsee	0	0	0	4	0	0	0	0	0	0	0	0	0	0	2
Wallace	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Washington	1	1	0	3	0	0	0	0	0	1	0	0	0	0	0
Wichita	0	0	6	0	0	0	0	0	0	1	0	0	0	0	0
Wilson	1	0	2	0	24	0	0	0	0	5	0	0	0	0	0
Woodson	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
Wyandotte, except,	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Kansas City	11	1	5	3	0	2	3	0	2	20	0	15	0	0	29
Rosedale	0	0	0	0	0	0	0	0	0	0	0	0	0	0	53

* Delinquent.

Other communicable diseases: Erysipelas, 8; cancer, 21; trachoma, 5; gonorrhœa, 143; syphilis, 114; pellegra, 1; lethargic encephelitis, 1; trichinosis, 1; chancroid, 1.

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Vitamins as Foods, Not Medicine.

By M. E. Jaffa, M. S., Consulting Nutrition Expert, California State Board of Health.

The subject of vitamins is a live one—interesting to both the scientist and the layman. The former gathers his information from the works of coscientists and his own investigations. Unfortunately, the layman is getting most of his through advertisements appearing in our daily papers. It is very questionable whether this condition of affairs is as it should be.

The following three facts must be accepted:

1. There are three types of vitamins, A, B and C; A being soluble in fat, and B and C being soluble in water.
2. Vitamins are unidentified dietary essentials, therefore,
3. No diet can be complete without them.

The question is, How is it best to obtain these vitamins? There are two sources open to the public:

(*a*) The natural foods—milk, eggs, meat, fruits and vegetables. The value of these as sources of vitamins does not appear in colored headlines and variegated cuts in our daily papers, more's the pity.

(*b*) Through proprietary products, granting for argument's sake that these products are as advertised.

Which is the better source? This question may be discussed under two different captions: (1) Nutritionally; (2) financially.

1. Nutritionally.

There is no better source of vitamins A and B than milk. But in addition to the vitamins in milk there is also a protein of the highest biological value, mineral matter essential to growth, and a carbohydrate not only of high caloric value but which, in view of late investigations, has an important bearing on the intestinal flora in man and other animals.

Recent researches by Professor Rettger and associates, of Yale, have shown pretty conclusively that milk, whether sweet or sour, has a beneficial influence on the intestinal flora; that is, the presence of milk in the intestines produces a condition which favors the development of desirable bacteria. It is thus seen, therefore, that in addition to the food value of milk it has another value as a nutrient for desirable intestinal bacteria.

Doctor Rettger has also proven clearly with reference to the growth of healthy normal chicks that milk is a most valuable and necessary food, and it makes no difference whether fresh skimmed milk is fed or whether sour milk is fed, the results are practically the same and far more satisfactory than when no milk is fed. This is merely to emphasize the fact that in normal nutrition it is the milk solids which are so valuable and not the condition of the milk.

While it is true that milk is such an excellent source of vitamins A and B, it is not by any means the only source. Eggs, fresh fruits and vegetables, particularly the leafy vegetables, also furnish ample supply of these dietary essentials. In fact, it may be said that vitamin B is well distributed through our common foods.

No mention has been made with reference to vitamin C in milk, for the reason that while this vitamin is present in milk it is not to the same extent as are either A or B, and, furthermore, the potency of A and B is not appreciably lessened by proper pasteurization, whereas C may be. It would therefore seem that it would not be well to depend upon milk or any of our ordinary cooked foods for vitamin C. Probably the best sources of vitamin C are the citrus fruits—lemon, orange and grapefruit. There are two *raw* vegetables which rank equally in this respect with lemon juice, and those are the onion and the cabbage. For those who like raw onions this is an added reason for continuing the consumption.

Another valuable source for vitamin C is tomato juice, and this is true whether the juice is raw or cooked. In other words, tomato juice is an exception to the general rule regarding the content of vitamin C in cooked foods.

From the foregoing it is evident then that if one uses a mixed or varied diet—that is, one containing adequate representation from all the five classes of foods and meeting the respective caloric requirement—there will be no need to worry about the vitamins. Such a diet will furnish an ample supply of these dietary essentials which will more than meet the body's requirements. In other words, then, when a person consumes milk, meat, eggs, fruits and vegetables, his system not only receives vitamins A, B and C in their best form, but in addition receives other nutrients and calories of the highest biological value.

2. Financially.

It would be a somewhat difficult matter to estimate the cost of vitamins in the ordinary mixed diet because of the fact that the body requires an adequate amount of good protein, mineral matter and calories, and when these are furnished from the best sources they are accompanied by the three types of vitamins, A, B and C. It might, therefore, be said that the vitamins are practically furnished without cost.

The condition of affairs is entirely different, however, when the commercial preparations are considered. In most cases the filler or carrier of the advertised vitamin has little protein or caloric value. The daily cost of such preparations is not expensive when considered as a medicine. Vitamins, however, should not be regarded as a medicine or even a tonic. They are dietary essentials and should be so *classed* and *regarded*. If a correct diagnosis indicates a lack of vitamins, then the diet must of necessity be lacking in vitamin-rich foods, which should be immediately added to the diet.

It has been proved in certain cases that preparations containing vitamins, when given as a supplement to a deficient diet, do not accelerate the increase in weight to anything like that which is produced under similar conditions with the vitamin-bearing foods alone.

A conservative estimate of the daily expenditure for the proprietary vitamin product is ten cents. If, in place of spending this amount for the commercial product it were expended for one pint of milk and an orange, not only would vitamins in their best form be obtained, but in addition other valuable nutrients and calories not provided by the commercial product.

So much has been written with reference to nutrition and the nutritive value of our staple foods that it would hardly seem necessary to devote so much space to this subject. In view, however, of the constantly increasing number of the proprietary products advertised as being rich in vitamins which are offered to the public, it would appear that a word of caution is not out of place.

The newspaper should not be considered as one's physician or diagnostician. The medical journals should carefully censor all offered advertisements relative to vitamins and not permit insertion of those making claims that are in any way misleading or deceiving.—*Bulletin California State Board of Health.*

Report of Division of Water and Sewage, April, 1922.

Albert H. Jewell, Chief.

Permits Issued or Refused for Waterworks and Sewerage.

Date.	*Place.*	*Nature of improvement.*
Apr. 6	Peabody	Sewer extensions.
Apr. 25	Almena	Sewerage annd sewage disposal.
Apr. 25	Hiawatha	Sewer extensions.

No inspections made.

Plans or preliminary reports have been received or conferences have been held with municipal authorities for new work at the following places:

Fort Scott	Sewer extensions.
Sharon Springs	Sewers and sewage disposal.
St. Francis	Sewer system.
Lawrence	Water improvement.
Herington	Water improvement.
Highland	Water improvement.
Colony	Waterworks.
Moline	Sewerage.
Sterling	Sewerage.
Topeka (State Hospital)	Water improvement.
Utica	Water supply.
Wathena	Water supply and sewerage.
Neodesha	Water-purification improvement.
Pratt	Water improvement.
Atchison	Mausoleum.
Kansas City	Mausoleum.
Atchison	Swimming pool.
Manhattan	Swimming pool.
Horton	Water improvement.
Ellinwood	Sewers.
Wa Keeney	Sewers.
Ellsworth	Additional water supply.
La Crosse	Additional water supply.

Record of analyses made in the water and sewage laboratory at Lawrence during the month of April, 1922:

	Bact.	*Chem.*	*Miscel.*
City supply	562	5	..
Bottles water	0	..	..
Private supplies	18	..	..
Railroad supplies	1	..	..
Ice	47	..	..
Survey	323	..	..
Chlorides	..	..	4
Sand	..	..	7
Lime	..	..	2
Total	951	5	13—969

Licenses issued.

Date.	*Place.*	*Person or firm and purpose.*
Apr. 8	Arkansas City	Henneberry & Co. Manufactured ice.
Apr. 24	Atchison	Home Ice Co. Manufactured ice.
Apr. 8	Axtell	J. R. Sidwell. Natural ice.
Apr. 24	Beattie	City ice plant. Manufactured ice.
Apr. 8	Bushton	J. F. Schroeder. Manufactured ice.
Apr. 8	Conway Springs	Frantz Water Co. Manufactured ice.
Apr. 28	Deerfield	August Kettler. Natural ice.
Apr. 24	Delphos	Oscar O. Brock. Natural ice.
Apr. 24	Ellis	Ellis Ice Co. Manufactured ice.
Apr. 24	Emmett	Frank Ditch. Natural ice.
Apr. 28	Gaylord	Community Ice & Amuse. Co. Natural ice.
Apr. 8	Glen Elder	Glitzke & Co. Natural ice.
Apr. 24	Goff	Nick Henery. Natural ice.
Apr. 28	Haddam	E. W. McKinney. Natural ice.
Apr. 24	Harlan	E. L. Granger. Natural ice.
Apr. 24	Herndon	Andrew Unger. Manufactured ice.
Apr. 24	Hill City	D. H. Dyas. Natural ice.
Apr. 24	Hill City	Charles A. Pedroja. Natural ice.
Apr. 8	Horton	W. G. Kelley. Natural ice.
Apr. 24	Jetmore	Thompsie Haun. Natural ice.
Apr. 24	Lebanon	Sullivan & Beardsley. Natural ice.
Apr. 8	Leona	Harry Mailler. Natural ice.
Apr. 8	Longford	Farmers Merc. Coöp. Assn. Natural ice.
Apr. 24	Lyndon	A. A. Lindsay. Natural ice.
Apr. 8	Mount Hope	G. F. Howell. Manufactured ice.
Apr. 24	Manchester	Harry Wolf. Natural ice.
Apr. 24	Medicine Lodge	Medicine Lodge Ice Co. Manufactured ice.
Apr. 24	Melvern	Melvern Ice Co. Natural ice.
Apr. 24	Minneapolis	Guthrie Ice Co. Natural ice.
Apr. 28	Paradise	Paradise Meat Market. Natural ice.
Apr. 28	Peabody	Peabody Light Power & Ice Co. Manufactured ice.
Apr. 24	Portis	Alva Lemon. Natural ice.
Apr. 24	Prairie View	Ben Van Diest. Natural ice.
Apr. 24	Robinson	F. A. Bombeck. Natural ice.
Apr. 28	Severance	Henry Swetland. Natural ice.
Apr. 24	Summerfield	Craven Grain Co. Natural ice.
Apr. 24	Tipton	Phillip Ellenz. Natural ice.
Apr. 28	Valley Falls	Myers Sanitary Milk Co. Manufactured ice.
Apr. 28	Wamego	Wamego Seed & Elev Co. Manufactured ice.
Apr. 24	Weir City	Union Ice & C. S. Co. Manufactured ice.
Apr. 24	Wellsville	C. A. Smith Elec. Co. Manufactured ice.
Apr. 7	Belleville	Union Pacific. City supply (refused.)
Apr. 7	Belleville	Rock Island. City supply (refused).
Apr. 7	Fort Scott	Frisco. City supply.
Apr. 7	Fort Scott	Missouri Pacific. City supply.
Apr. 7	Garrison	Union Pacific. Private supply.
Apr. 7	Greenleaf	Missouri Pacific. City supply.
Apr. 7	Havensville	Union Pacific. Private supply.
Apr. 7	Marysville	Union Pacific. City supply.
Apr. 7	Marysville	Grand Island. City supply.
Apr. 7	Onaga	Union Pacific. Private supply (refused).
Apr. 7	Washington	Missouri Pacific. City supply.

Depressing Conditions.

Doctor: "Your trouble is dyspepsia; you should laugh heartily before and after your meals."

Patient: "Impossible, doctor. I cook them myself and then I wash the dishes."—*Medical Pickwick.*

Samantha Proctor.

A north Missouri editor says he saw this on a moss-grown tombstone: "Here lies our wife, Samantha Proctor, who ketched a cold and wouldn't doctor. She couldn't stay, she had to go; praise Him from whom all blessings flow."

Report of Public Health Laboratory for April, 1922.

	April.		*March.*	
1. Complement fixation test for syphilis:				
Blood speciments from physicians:				
Positive	82		104	
Negative	344		347	
Doubtful	26		57	
Unsatisfactory	18		24	
Totals	——	470	——	532
Blood speciments from Lansing:				
Positive	25		40	
Negative	78		150	
Doubtful	20		35	
Unsatisfactory	5		6	
Totals	——	128	——	231
Spinal fluid from physicians:				
Positive	8		5	
Negative	10		14	
Doubtful	1		1	
Totals	——	19	——	20
Spinal fluid from Lansing:				
Positive	0		0	
Negative	1		0	
Totals	——	1	——	0
2. Globulin test—spinal fluid:				
Positive	9		9	
Negative	8		8	
Totals	——	17	——	17
3. Examination of sputum for tubercle bacilli:				
Positive	16		18	
Negative	119		91	
Unsatisfactory	2		2	
Totals	——	137	——	111
4. Examination of cultures for diphtheria bacilli:				
Positive	15		26	
Negative	104		109	
No growth	4		15	
Totals	——	123	——	150
5. Examination of smears for gonococci:				
From physicians:				
Positive	3		6	
Negative	21		21	
Unsatisfactory	1		2	
Totals	——	25	——	29
From Lansing:				
Positive	3		9	
Negative	95		136	
Totals	——	98	——	145
6. Examination of blood—Widal test for typhoid:				
Positive	8		1	
Negative	9		6	
Unsatisfactory	1		2	
Totals	——	18	——	9
7. Miscellaneous examinations:				
Urine for tuberculosis (G. P. inoculation)	1		....	
Urine for microscopic examination	1		....	
Water analysis, bacteriological	2		....	
Bacteriological examination, canned foods:				
Spinach	6		....	
Blackberries	1		....	
Cultures from pus	2		....	
Spinal fluid for meningococcus	1		....	
Colloidal gold, spinal fluids:				
Normal	1		....	
Paretic	1		....	
Pleural exudates for tuberculosis (G. P. inoculation)	2		....	
Culture from root of tooth	1		....	
Autogenous vaccine	1		....	
Fecal calculi (chemical examination)	1		....	
Miscellaneous smear	1		....	
Miscellaneous culture	1		....	
Animal head for rabies (unsatisfactory)	1		....	
Totals	——	24	——	33
Totals for month		1,060		1,277

LABORATORY ACTIVITIES.

The laboratory had exhibits at the meeting of the Golden Belt Medical Society, held at Topeka, and at the Health Institute and Health Officers' Annual School at Kansas City, Kan.

At the request of Mr. F. E. Rowland, assistant chief food and drug inspector, bacteriological analyses were made of six cans of spinach and of one can of blackberries. Several of the cans yielded high bacterial counts; one can of spinach was decidedly high in its bacteria content, and was also somewhat rusty inside.

Data available at the State Penitentiary at Lansing were obtained and studied in their relation to the "doubtful" Wassermann results obtained on the blood specimens of the inmates. The conclusions arrived at from this study are:

1. Doubtful reactions are usually obtained on cases undergoing active treatment and on cases where treatment was incomplete.
2. The cholesterin antigen is more sensitive, and therefore more reliable, than the plain antigen as a guide in the treatment of syphilis.
3. Whenever fixation of complement is obtained with one antigen only, and there is no history of infection and no symptoms are present, another blood specimen should be taken and tested before the presence of syphilitic infection is ruled out.

Further data are being compiled from other sources.

Malnutrition.

Malnutrition is a term that is often very loosely used. In a broad sense it includes everything that retards the individual or tends to keep him or her below par.

The underlying factors that are responsible for the condition are of necessity varied, and this accounts in some measure for the many failures that are reported from following some particular line of corrective treatment. When we hear, as we often do, of treating all cases of malnutrition in a certain routine way, as, for instance, by open-air schools, by feeding, by resting, by removing tonsils and adenoids, etc., it is no wonder that failure is registered in a certain proportion of cases.

We have many well-meaning people who endeavor to create a system of cure by adhering to one specific method, forgetting that the whole domain of human knowledge is not too wide from which to draw for the alleviation of human ailments. The faddist, pseudo-scientist or one-thought healer has no place in scientific medicine.

The most common causes that the school nurse has to deal with have been summarized by Emerson as follows:

1. Physical defects.
2. Lack of home control.
3. Fatigue.
4. Faulty food habits.
5. Faulty health habits.

Any one or any combination of these may be responsible for the condition which we call, for lack of a better name, malnutrition. It will thus be seen that it would be futile to expect satisfactory results in every case by directing our efforts in only one particular direction or against only one of the causes that may be operative.

A careful examination is the first requisite, that the cause or causes may be located and the proper remedies applied. If it is found to be due in whole or in part to a physical condition or defect this should be corrected where possible. Often a very simple operation, such as removal of diseased tonsils or adenoids, may be all that is needed to turn a child that is below par mentally and physically to one that is normal. There may be other physical defects; but whatever they may be, they should first receive careful attention and then such other methods applied as may be indicated, with every assurance of satisfactory results.

The second cause listed is often difficult to manage. When it is necessary to enter the home and to dictate to its head how it should be conducted we often get into trouble. These cases require much tact on the part of the nurse, but unless the situation is properly dealt with all our other efforts at correction will be very badly hampered. If the parents' coöperation is secured in providing regular habits, early bedtime, plenty of sleep and pleasant home conditions very much will be accomplished.

The third cause enumerated—fatigue—is one that is linked up with our social system. This is a fast age, and the children are taking up the gaits of their parents and frequently going one better. What with heavily loaded school courses, with so-called educational frills being added at every turn of the way, the demands of society and the incessant whirl of "doings," the young life is kept at a high tension. It is little wonder that under these conditions so many give way to the strain. A prolonged regulated daily living régime is what is required in those cases to give nature a chance to regain lost tone and to keep it.

Faulty food habits embrace not only faults of amount, but of kind. Everyone knows that we take food to build structure, to repair waste and to supply energy, so that body and mind may function normally and efficiently. To secure these results we must have proteins to furnish matter for the repair of tissues and fats, and carbohydrates for energy.

In addition to the above, the body requires certain mineral substances, such as iron, lime, sodium, potassium, phosphorus, etc. These are found in varying amounts in meat, milk, eggs, fruit, vegetables and greens.

It has been found, however, that with a properly proportioned diet of proteins, fats, carbohydrates and minerals, growth and health are not maintained unless vitamines also are present.

Vitamines are substances that stimulate cell activity. They have much to do with growth, nutrition and health. We know that some foods are very rich in them and that others are very poor. We also know that heat, drying or canning destroys them in whole or in part. Tomatoes, oranges, lemons and grapefruit, however, are exceptions to this rule. Alkalies such as baking soda seem to destroy them. Vitamines are found in all fresh vegetables and greens. They are present in grains, but mostly near the outside. White flour, polished rice and fine cereals contain very little. Flour from whole wheat and cereals from whole grain contain much. Spinach, lettuce, greens, tomatoes, turnips, carrots, potatoes, etc., are rich in them, as are also milk, butter, eggs, yeast and cod-liver oil. Meat contains little if any. A diet of meat, white bread and lard, although containing the necessary calories in proper proportion, would fail as a satisfactory ration, because it is deficient in vitamines. It requires some greens to go with it. Malnutrition and disease would be the result of such a diet if long continued.

Milk is the most perfect of all foods, as it contains, in proper proportion, every element needed for the health, growth and development of the body. It should be made part of the daily rations of every school child.

Attention to all of the foregoing will not succeed in affording relief unless health habits are made a part of everyday life. These are now becoming so well known through the work of the modern health crusade that it will be unnecessary to take them up in detail. The success in dealing with cases of malnutrition will depend very largely on how well the underlying causes are detected and on how well rational methods have been applied for their correction.—*North Dakota Pennant.*

The Salt Habit.

We are just beginning to be conscious of the fact that there is such a thing as "the salt habit." Careful and conscious observation for a time will reveal that great numbers of people habitually use salt on their foods in excess of the body needs, and many use salt in such quantities as to warrant the question being raised as to whether or not such excessive amounts may not be harmful to the body organs and tissues.

Chloride of sodium, or common salt, is classed as one of the nutrient mineral constituents necessary for maintaining normal nutrition. The blood and other body fluids in health are held to a rather constant amount of saline content, so that when salt is taken in excessive amounts it has to be eliminated by the functions of the kidneys. There are authorities who contend that the constant use of excessive amounts of salt overstimulates this function and may work injury. It is a matter of common experience that when we eat food that is unusually salty that an abnormal thirst is created, and thus the water intake is increased, sometimes in amount as to preceptibly increase arterial tension and overstimulate the excretory organs.

It is generally agreed by the best physicians that in kidney disease and in organic diseases of the heart the salt intake should be reduced to a minimum to the end that the heart may not be unduly taxed by a large volume of water in the circulatory system, nor the kidneys be overtaxed in their effort to get rid of it. Kidney disease is such an insidious affection, and there are so many people in adult life who are right on the border line of incipient kidney affection, that the salt habit may be one of the so-called "last straws" to precipitate kidney irritation, increasing hypertension and overstimulation of an organ that needs rest rather than prodding. It usually happens, too, that those who use excessive amounts of salt are those who are inclined to indulge in the excessive use of other condiments, such as pepper, spices, hot relishes, etc., all of which increase the blood pressure and tax the kidney functions.

It has been shown that those who live largely upon vegetables really require a larger salt intake than those whose diet is largely that of meats. This need is based upon the fact that vegetables contain large portions of potassium salts, which tend to drive out the sodium salts, and hence the demand of the body in order to maintain the saline equilibrium of the body fluids.

It is thought that, on an average, most people consume about ten times as much salt a day as is absolutely necessary to meet the body needs. It would appear, therefore, that those who fairly cover their foods with a layer of salt are indulging in a habit that may prove to be highly deleterious, particularly if they are suffering from incipient kidney or heart disease.—*S. J. Crumbine, M.D., in Health.*

Health and Christianity in China.

The following from the pen of Dr. W. W. Peter, executive officer of the Council of Health Education, Shanghai, China, is such a clear and forceful statement of the situation in that disease-burdened country as to stir the imagination and excite the sympathy of everyone interested in either health or religion. The pity of it is that what Doctor Peter says of China is applicable to our great country, only in a less degree. Disease has always stifled progress and burdened civilization, both economically and religiously. How long are the nations of the earth going to tolerate preventable sickness and be practically unconcerned with the tremendous mortality? Doctor Peter's letter follows:

"Present health conditions in China have a retarding influence on every phase of progress, including that of the Christian church. There are so many different kinds of communicable, preventable diseases to be found that China is often spoken of as 'the fountainhead of epidemic diseases.' These include smallpox, typhus, typhoid, cholera, plague and others which are susceptible of control, as well as tuberculosis, hookworm, malaria, which are more difficult to stamp out. It is these diseases which constitute the surplus load which China is carrying to-day as compared with other countries. The birth and death rates are high. The turnover in human life is exceedingly rapid. These conditions militate heavily against the attainment of a high general average of physical and mental as well as spiritual life.

"The end result is to slow up the progress of the kingdom. For with such a weak, shifting, uncertain physical base on which to build, it is all the more difficult for institutions beneficial to individual and national life to establish themselves. Leaders are swept away on the current of disease. Promising young men and women are taken off before they have an opportunity to make their life's contribution. In the face of existing conditions, it requires more life, more effort and more money to make progress than would otherwise be the case. The people find it more difficult to throw off the shackles of economic slavery and intellectual bondage."

Present conditions constitute a challenge to the Christian forces in this country, for they have it within their means to help bring about a change for the better. In this day for the Christian church to confine itself to the traditional practices of curative medicine upon the individual sick, and to ignore the larger public-health problems which extend beyond the individual into the social group of which he is but a part, will go far to prove the unwillingness of the Christian church to come to grip with vital social issues, or its shortsightedness in failing to see their importance. There is a cry rising up in the world, a cry which may soon be heard in China in greater volume, that Christianity make of itself something socially as well as individually practical, or suffer itself to be cast aside by the world of perplexed but forward-thinking men who are groping for the light whereby men may live together.

Public-health Nursing Service.

The State Board of Health through its public-health nursing service is initiating a new service for public-health nurses and communities in Kansas. It offers, through its vocational service, to secure qualified public-health nurses for the communities desirous of employing a public-health nurse, and to place public-health nurses who are seeking public-health nursing positions.

Through this service we hope to fit the right nurse to the right position, thereby preventing qualified public-health nurses from being obliged to seek positions outside of the state, and to reduce to a minimum the possibilities of the communities employing nurses who have not had adequate public-health nursing experience to successfully perform the duties demanded by the particular position.

All communications concerning the requests for nurses and positions should be addressed to Miss Hulda A. Cron, R. N., state supervisor of public-health nursing, State Board of Health, Topeka, Kan.

NOTICE.

Two samples of cider vinegar, inspector's numbers 60845 and 60846, bought by the Twenhofel Manufacturing Company, Kansas City, Kan., from Speas Vinegar Works, Kansas City, Mo., were reported in our November issue by error. The samples were submitted by Mr. Twenhofel and were investigational only. Mr. Twenhofel reports that the car of vinegar which these two samples represented was not sold in Kansas.

Modern Version.

Old Father Hubbard went to his cupboard,
  To tickle his palate, that's all;
In forty-eight hours, a prayer and some flowers—
  Alas! It was wood alcohol.

—*Practical Druggist.*

Mammy Knows 'Em.

Booth Tarkington met a negro woman with her youthful family.

"So this is the little girl, eh?" Tarkington said to her, as she displayed her children. "And this sturdy little urchin in the bib belongs, I judge, to the contrary sex?" "Yassah," the woman replied, "yassah, dat's a girl, too."

Castor Oil as Fly Poison.

Boyé and Guyot find that castor oil, either alone or mixed with sugar, is very attractive to house flies, and is at the same time an active poison for them. That the fatal action is not solely mechanical is shown by the fact that other oils, such as olive and nut oil, have no such toxic action under similar conditions. The addition of croton oil in the proportion of two drops to one ounce of castor oil greatly increases the toxic action on flies, and in this small proportion cannot be considered dangerous to animals.

Considerate to the Last.

Mose lay in the pest house suffering with smallpox. The doctor had just informed him that his condition was grave.

"Send for a priest, send for a priest," he moaned.

"But you're Jewish, aren't you?" expostulated the doctor. "You mean send for a rabbi."

"No, send for a priest," said Mose, "it's better a rabbi shouldn't get the smallpox."—*Scientific Grist.*

Easily Explained.

A physician was giving an informal talk on physiology. "Also," he remarked, "it has been found that the human body contains sulphur." "Sulphur!" exclaimed one of the girl students. "And how much sulphur is there in a girl's body?" "Oh, the amount varies," said the doctor, smiling, "according to the girl." "Ah!" said the girl, "and that is why some of us make better matches than others?"

A Single Atom.

Auntie Dubb gave Baby Sue
A dose of $HgCl_2$.
Sue is with the angels now
And auntie still is wondering how
A single atom of Cl
Can make such change in calomel.

Jenkins was sitting down to breakfast one morning when he was astounded to see in the paper an announcement of his own death. He rang up friend Smith at once. "Hello, Smith!" he said. "Have you seen the announcement of my death in the paper?"

"Yes," replied Smith. "Where are you speaking from?"

If it is true that Mother Eve did not know she was naked until she ate the apple, we suggest that in this time of questionable styles, it might be well to pass the apples.—*Anonymous.*

Of Beauty and Glands.

"Shakespeare's most famous poem," wrote a schoolboy, "was 'Venus and Adenoids.'"—*Boston Transcript.*

The fatal tendencies of the man who didn't know it was loaded are fast giving place to the motorist who is always going at a very slow rate of speed when he kills his victims.—*Baltimore American.*

Kansas reports show more Negroes dying than being born. This is partly because Negro births are not registered with as much care as those of whites.

The doctor who fails to register the full name of the child when he files a birth certificate has not done his full duty toward the little, new Kansan.

"Don't you wisht you was a bird, Jimmy, and could fly way up in the sky?" mused little Jean dreamily.

"Naw!" scorned Jimmy. "I'd ruther be a elephant and squirt water through my nose."

Patron at table: Oh, say, waiter! How long have you been employed here?

Waiter: Six weeks, sir.

Patron: Pardon me. Then it isn't you that I've ordered that steak from. —*Houston Post.*

To-day.

To-day is what you have. It is also what you are. And again, To-day is what you do. And if you haven't anything, and aren't anybody, and do nothing—why, then, for you there is no To-day.

For To-day is music. To-day is art. To-day is literature. To-day is joy. To-day is work. To-day is play. To-day is LIFE.

Yesterday is no problem—for it is *past.* To-morrow is no problem—for it isn't here. To-day is supremacy. To-day is the world. To-day is opportunity!

Crowd in upon it, then. To-day—take hold upon its faintest chance. Spread your smiles—To-day. Be game—To-day. Be glad and great—To-day.

To-day is the day—your day.

To-day is Time and Change doing its job. Are you a vital part of the play? To-day you may start out all anew. To-day you may put to use what you learned a day ago. The center of your entire life may revolve about—To-day.

But, above all things, do not fear—To-day. And let all worry slide. All things that do not count—let them go, too. Work and help and love—To-day.

For this To-day will never dawn again!

—*George Matthew Adams.*

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Slow up!

Health pays dividends.

Drink four glasses of water daily.

Tuberculosis is a community problem.

Take hold with your bare hands—kid gloves weaken your grip.

"Early to bed and early to rise and you will not meet any prominent people."

Sanity lies in the ability to think individually and act collectively.

"To kill the gloom and fill the room with things worth while—just smile."

Health is Nature's reward for being and continuing in harmony with her physical laws.

"Community service is the rent a person pays for the space he occupies on this earth."

Modern medicine, including preventive medicine, has added fifteen years to the average span of human life during the past seventy-five years.

Kansas towns are keeping at least two rats for every man, woman and child, and the rural communities are harboring and feeding at least ten rats per person.

Bat the rat!

MORBIDITY REPORT FOR MAY, 1922.

COUNTIES AND CITIES.	Tuberculosis	Typhoid and Paratyphoid	Smallpox	Diphtheria	Influenza	Scarlet Fever	Measles (morbilli)	German Measles (rubella)	Whooping Cough	Chickenpox	Mumps	Pneumonia (all forms)	Meningitis (epidemic)	Poliomyelitis (epidemic)	Other diseases (see Addenda)
THE STATE	233	32	70	119	17	151	44	2	130	254	81	48	3	1	301
Allen	1	0	0	4	0	0	1	0	1	0	0	0	0	0	0
Anderson	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Atchison, except	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Atchison city	0	1	0	1	0	1	1	0	0	0	0	0	0	0	0
Barber	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0
Barton	1	0	6	1	1	0	0	0	7	4	1	0	0	0	0
Bourbon, except	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Fort Scott	0	0	0	3	0	0	0	0	0	0	1	0	0	0	6
Brown	1	2	1	2	1	4	0	0	0	0	0	0	0	0	0
Butler	2	5	2	0	0	5	0	0	1	9	0	3	0	0	1
Chase	0	0	0	0	0	0	0	0	0	4	0	1	0	0	1
Chautauqua	3	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Cherokee	3	0	0	2	0	0	0	0	8	10	1	1	0	0	1
Cheyenne	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Clark	0	0	0	2	0	6	0	0	0	8	1	0	0	0	0
Clay	0	0	0	0	0	2	0	0	0	0	0	0	0	0	1
Cloud	1	1	0	0	0	4	0	0	2	3	1	0	0	0	3
Coffey	1	0	0	2	0	6	0	0	0	0	0	0	0	0	0
Comanche*	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Cowley	8	2	0	1	0	2	1	0	4	3	0	0	0	0	2
Crawford, except	6	0	0	1	0	0	1	0	0	0	0	0	0	0	0
Pittsburg	0	0	0	2	0	1	0	0	0	0	0	0	0	0	0
Decatur	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0
Dickinson	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Doniphan	1	0	0	3	0	0	0	0	0	2	0	0	0	0	0
Douglas, except	0	0	0	0	0	7	2	0	0	1	0	1	0	0	0
Lawrence	4	1	2	0	0	0	0	0	0	8	0	0	0	0	7
Edwards	0	0	0	0	0	2	0	0	1	0	0	0	0	0	0
Elk	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Ellis	0	0	0	4	0	0	0	0	0	0	0	0	0	0	1
Ellsworth	1	0	0	1	0	1	2	0	7	3	0	0	0	0	2
Finney	1	0	0	0	0	1	7	0	0	0	28	3	0	0	1
Ford	8	1	1	3	0	1	1	0	11	13	1	0	0	0	6
Franklin	0	1	0	1	0	1	0	0	0	0	0	1	0	0	0
Geary	15	0	0	0	0	2	0	0	4	2	0	0	0	0	2
Gove	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Graham	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0
Grant*	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Gray	0	0	0	1	0	0	0	0	1	1	16	1	0	0	0
Greeley	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Greenwood	0	0	2	0	0	1	0	0	0	0	0	0	0	0	0
Hamilton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Harper	0	0	0	0	0	0	0	0	0	3	0	0	0	0	2
Harvey	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
Haskell	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hodgeman	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jackson	2	0	0	1	0	4	0	0	1	0	0	0	0	0	0
Jefferson	0	0	0	0	0	4	0	0	0	3	0	0	0	0	0
Jewell	0	0	1	4	0	1	0	0	0	10	0	0	0	0	0
Johnson	1	0	0	1	0	0	0	0	1	1	0	1	0	0	0
Kearny	0	0	0	0	0	1	1	0	0	12	3	0	0	0	0
Kingman	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0
Kiowa	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Labette, except	1	0	0	1	0	0	0	0	0	1	0	1	0	0	14
Parsons	2	1	0	3	0	2	0	0	0	0	1	0	0	0	2
Lane*	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Leavenw'th, except	21	0	0	0	0	2	0	0	0	0	0	0	0	0	0
Leavenworth city	1	0	0	2	0	0	0	0	0	0	0	0	0	0	1
Lincoln	0	0	3	1	0	0	0	0	0	0	0	2	0	0	0
Linn	0	3	0	1	1	0	1	0	3	2	0	0	0	0	0
Logan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lyon	2	1	1	3	0	1	0	0	0	0	0	0	0	0	0

MORBIDITY REPORT FOR MAY, 1922—Concluded.

Counties and Cities.	Tuberculosis	Typhoid and Paratyphoid	Smallpox	Diphtheria	Influenza	Scarlet Fever	Measles (morbilli)	German Measles (rubella)	Whooping Cough	Chickenpox	Mumps	Pneumonia (all forms)	Meningitis (epidemic)	Poliomyelitis (epidemic)	**Other diseases (see Addenda)**
Marion	11	2	0	1	2	0	0	0	0	0	1	0	0	0	0
Marshall	0	0	0	0	0	2	1	0	0	1	0	0	0	0	0
McPherson	7	0	1	0	0	1	1	0	0	0	0	0	0	0	1
Meade	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Miami	2	0	0	0	0	0	0	0	0	0	0	1	0	0	0
Mitchell	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0
Montgomery, except	12	0	0	2	0	1	0	0	0	0	0	1	0	0	1
Coffeyville	1	0	11	2	0	0	0	0	0	1	1	0	0	0	2
Morris	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2
Morton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nemaha	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Neosho	3	3	0	5	0	0	0	0	0	0	0	0	0	0	0
Ness	0	1	2	0	0	1	1	0	0	0	0	0	0	0	0
Norton	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Osage	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Osborne	1	0	0	0	0	2	0	0	0	0	0	0	0	0	0
Ottawa	2	0	0	1	0	3	0	0	0	0	0	0	0	0	0
Pawnee	0	0	0	0	0	2	0	0	3	5	3	1	0	0	0
Phillips	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0
Pottawatomie	1	0	0	0	0	3	0	0	0	0	0	0	0	0	0
Pratt	1	0	1	0	0	1	0	0	0	0	1	0	0	0	0
Rawlins	1	0	0	1	11	3	0	0	0	0	0	0	0	0	0
Reno, except	0	0	0	0	0	1	0	0	0	0	0	2	0	0	1
Hutchinson	0	0	7	2	0	3	0	0	0	1	0	1	0	1	6
Republic	0	0	1	1	0	1	0	0	0	1	0	0	0	0	0
Rice	1	0	0	1	0	0	0	0	0	4	0	1	0	0	0
Riley	1	1	1	0	0	1	0	0	0	6	1	0	0	0	3
Rooks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rush	1	0	0	0	0	2	0	0	8	0	0	0	0	0	0
Russell	1	0	8	0	0	3	0	0	0	0	0	0	0	0	0
Saline, except	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Salina	23	0	0	0	0	2	0	0	0	1	1	0	1	0	1
Scott	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Sedgwick, except	1	0	1	0	0	5	0	0	0	1	0	0	0	0	1
Wichita	8	0	9	17	0	18	17	2	38	47	0	2	0	0	107
Seward	0	0	0	0	0	0	1	0	2	0	3	0	0	0	0
Shawnee, except	2	1	0	2	0	0	0	0	0	1	0	1	0	0	4
Topeka	16	0	0	12	0	9	1	0	14	38	0	11	0	0	43
Sheridan	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Sherman	1	0	0	4	0	1	0	0	0	0	0	1	0	0	0
Smith	1	1	0	2	0	1	0	0	0	0	0	0	0	0	0
Stafford	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
Stanton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stevens	1	0	1	0	0	0	0	0	2	0	0	0	0	0	0
Sumner	4	1	0	1	0	1	0	0	2	12	10	0	0	0	5
Thomas	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Trego	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0
Wabaunsee	0	0	0	1	0	1	0	0	1	0	0	0	0	0	0
Wallace	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Washington	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wichita	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wilson	0	1	0	0	1	0	0	0	3	8	0	2	0	0	0
Woodson	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Wyandotte, except	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Kansas City	19	0	8	8	0	6	2	0	5	19	5	8	1	0	37
Rosedale	0	0	0	0	0	0	0	0	0	0	0	0	0	0	31

* Delinquent.

ADDENDA.—Other communicable diseases: Malaria, 1; erysipelas, 2; cancer, 26; trachoma, 1; gonorrhœa, 126; syphilis, 135; chancroid, 8; tetanus, 2.

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The Kansas State Board of Health—At Your Service.

The executive officer of the Kansas State Board of Health submits the following to the people of Kansas in order that they may have a better understanding of the organization, purposes and scope of work of their State Board of Health, and how through its various divisions the department attempts to serve the health interests of the people of the state. For convenience in administration and for greater efficiency in handling the work the department's activities are divided into the following divisions:

1. Division of Communicable Diseases and Sanitation.
2. Division of Vital Statistics.
3. Division of Foods and Drugs.
4. Division of Water and Sewage.
5. Division of Child Hygiene.
6. Division of Venereal Diseases.
7. Division of Public-health Education.
8. Division of Public-health Nursing.

FIRST: *Division of Communicable Diseases and Sanitation.* The personnel of this division includes eight persons: the chief of the division, who is also director of the county health work; the epidemiologist; a morbidity and statistical clerk; a stenographer; and the personnel of the public-health laboratory, which includes the director of the laboratory, two technicians, and a porter who serves as a dishwasher and caretaker of the animals.

The work of this division includes a study of epidemics and diseases, using such repressive measures to prevent or suppress communicable diseases as may be authorized under the laws of the state and as are warranted by generally accepted sanitary and epidemiological procedure; the receiving and tabulating of reports of the prevalence of communicable diseases from 105 county health officers and 11 city health officers of the cities of the first class; the free distribution of diphtheria antitoxin and typhoid vaccine to the indigent poor of the state, and the emergency distribution of other biologicals, to the end that any unnecessary delay may be avoided in the saving of human life where such remedies are indicated but are unavailable in the local community.

The public-health laboratory provides containers for the collection of material, and desires that they be used at all times. Containers and instructions for the preparation and shipment of specimens will be sent upon request. The following examinations and tests are now made in this laboratory:

1. Examination for diphtheria bacilli.
2. Examination for the organisms of Vincent's angina.
3. Examination for meningococcus.
4. Examination for strptococcus hemolyticus.
5. Examination of sputum for the tubercle bacillus.
6. Examination of feces for enteric organisms (typhoid, paratyphoid and dysentery).
7. Examination of urine for the tubercle bacillus and for enteric organisms.
8. Examination of blood for malaria and for pathogenic bacteria.
9. Complement fixation test (Wassermann) for syphilis.
10. The Widal reaction for typhoid and paratyphoid fever.

11. Examination of smears for gonococcus.
12. Dark-field examination for the spirochete of syphilis (*Spirocheta pallida*).
13. Examination of cerebrospinal fluid for organisms, globulin content, and the Wassermann test.
14. Examination for parasites (blood, intestinal, etc.).
15. Miscellaneous examinations related to public-health problems.

SECOND: *Division of Vital Statistics.* The personnel of this division includes the state registrar, who is chief of the division; the assistant state registrar, a statistician, and six office clerks. This division records, classifies, card-indexes and tabulates the information contained on all the births, deaths and marriages occurring in the state, which are received from 1,000 local registrars of vital statistics and 105 county probate judges. In this division are recorded the proofs of citizenship and the legal rights of all those who are born and married in Kansas. Here also is recorded the deaths of all those dying in Kansas, and a careful study and tabulation is made of the various causes of death, so that, not only may the people know of the incidence, prevalence and mortality of disease, but that that information may be used by other divisions of the department as a guide in the suppression and control of preventable diseases. This division may be called the big family Bible of the commonwealth.

THIRD: *The Division of Foods and Drugs.* The personnel of this division totals twelve, including the chief of the division, the traveling inspectors and laboratory workers. Ten thousand food, drug and soft-drink establishments are under the inspection of this division. The traveling inspectors secure samples of foods, drugs and drinks that are suspected of being adulterated or misbranded within the meaning of the food and drug law, which are sent to either the food or drug laboratory, as the case may be, for purposes of analysis and examination. If found to be adulterated or misbranded, that fact is certified to the chief of the division, whereupon the matter is taken up for careful investigation and review. If thought to be necessary, information is filed with the county attorney in the county where the offense of the sale or the manufacture of adulterated foods or drugs was committed, and prosecution under the law requested.

This division also enforces the provisions of the weights-and-measures law. All scales and measuring devices in food and drug establishments, including flour mills and other food or drug manufacturing concerns, are inspected as to their accuracy.

Probably the most important service given to the people of the state by this division is through its sanitary inspection of places and things where foods, drugs and drinks are prepared, stored, sold or offered for sale within the state. Special warfare is made upon the prevalence of insects and vermin, particularly rats, mice and flies in food and drug establishments. Standards for the quality, purity and strength of foods and drugs are determined by the State Board of Health and enforced through the operation of the Division of Food and Drugs.

Another very important service rendered by this division to Kansas is the sanitary inspection of places and things, designed to safeguard foods, drugs and drinks from dangerous pollution or contamination. Persons known to be suffering from any of the communicable diseases are not permitted to work in food and drink establishments or to handle foods or drinks.

This division also, coöperating with the public-health laboratory, conducts milk surveys throughout the state; that is, a traveling laboratory, under the direction of the director of the public-health laboratory, is taken from town to town, by which means a bacterial examination is made of samples of milk secured by our traveling food inspectors, and thus is supervision made of the milk supply of the state as to its safety and wholesomeness.

FOURTH: *Division of Water and Sewage.* The personnel of this division is made up of a force of three sanitary engineers—the chief engineer being the head of the division—and six chemists, bacteriologists and workers in the water and sewage laboratory, the work of each being more or less dependent upon the other. The engineering branch examines all plans and specifications for the construction of waterworks or sewerage systems or extensions to existing systems. Before approval can be given for certain projects it is very often necessary to have analyses made, and these are made in the water and sewage laboratory.

The Division of Water and Sewage also has supervision over the operation of the waterworks and sewerage systems after construction is completed. This supervision requires the joint services of the laboratory and engineering force.

The municipal surface water supplies are inspected twice annually, one of these inspections being made with a field laboratory, where bacteriological and chemical analyses can be made at the plant. Weekly sets of samples are submitted from all these surface-water plants to the water and sewage laboratory, and the analyses are reported as soon as possible to the water superintendent in order that he may know the condition of the water which he is supplying.

The municipal supplies using ground water as sources of supply are inspected once annually and samples sent to the water and sewage laboratory for analysis. Six months later containers are sent to the water superintendents, who sends in a set of samples.

The water and sewage laboratory also examines water which is bottled and sold to the public for domestic consumption.

The ice used for domestic consumption must be analyzed by the laboratory and approved before a license for its sale will be issued.

The laboratory also analyzes samples of water sent in by health officers or doctors where they suspect the water in connection with a water-borne disease such as typhoid fever, dysentery, etc. In special cases, such as water supplies of rural schools, Y. M. C. A. or Boy Scout camps, analyses are made as a public-health measure.

All water used on trains, either in coaches or dining cars, is analyzed twice each year in the water and sewage laboratory.

Complete record is kept of all waters that have been analyzed, and a copy of these records may be obtained by writing to the laboratory and explaining the use for which the results are wanted, since the tabulation of this material entails considerable work.

In addition to the examination of plans and specifications for municipal water and sewerage systems and the inspection of the plants, plans and specifications are also prepared for water-supply and sewerage systems for the state institutions. This division also makes investigations of alleged nuisances and makes reports concerning the best means of remedying the condition. Plans for sewage-disposal systems for rural schools are furnished free of charge. Plans showing the proper construction of cisterns, private wells for water supply, sanitary privies and septic tanks for proper sewage disposal for single houses are prepared for distribution.

The engineering department also examines plans and specifications for the construction of mausoleums.

Although there are no rules and regulations pertaining to swimming pools, nevertheless many plans are submitted for the department's approval.

FIFTH: *The Division of Child Hygiene.* The personnel of this division includes the chief, who is a woman physician; three clerks; and two nurses and a caretaker on the public-health car "Warren." The work of this division concerns itself with a study of the causes of infant and maternal mortality, and the hygiene of the child. This is accomplished through a careful investigation of the causes of infant and maternal deaths; the holding of mothers' conferences, well-baby clinics, little mothers' leagues, and a prenatal correspondence course to an increasingly large number of expectant mothers. The public health car, traveling over the various lines of railroad throughout the state, has abundant opportunity to meet groups of mothers; through which means the mothers are afforded a personal conference with the chief of the division or the trained public-health nurses to discuss their own personal health problems. It is the aim of this division to put in the hands of every mother whose name and address can be secured a pamphlet on the care of the baby, and such other literature as she may request. Through this division silver-nitrate solution is furnished free to practicing physicians and midwives in the state, to the end that ophthalmia neonatorum in the newborn infant may be prevented, which disease is given as the cause of blindness in twenty-six per cent of the children in the State School for the Blind.

SIXTH: *Division of Venereal Diseases.* This division assists in the organization and conduct of venereal-disease clinics in the state, where people suffering from venereal infection can receive treatment free. Seven such clinics are now operating in the state. The division attempts to arouse public interest in the efforts of local officials in the enforcement of the laws against social vice; it carries on an extensive educational work through the high schools of the state, upon invitation of the superintendent of schools in the communities; it holds public meetings of various kinds, of an educational nature, featured by moving pictures or charts to hold the attention and fix information concerning matters of sex hygiene; it distributes free arsphenamine to any physician of the state for the treatment of indigent poor that may need antisyphilitic treatment; it provides ways and means whereby prostitutes and those whose conduct is of such a character as to spread venereal infection may be quarantined at the State Industrial Farm for Women. It has for distribution the following pamphlets:

For men and boys: "Man Power"; "Keeping Fit."
For parents: "The Parents' Part"; "The Wonderful Story of Life."
For the general public: "Conquering an Old Enemy."

For girls: "Healthy, Happy Womanhood."

For teachers: "Sex Education in the Schools."

Any of these pamphlets will be sent to the citizens of Kansas upon request.

The division will furnish, upon request, an outline for the study of social hygiene by any group or club. It will coöperate with local authorities regarding the venereal-disease problems in their community. A bibliography of suitable books on sex hygiene may be secured upon request by any who are interested.

SEVENTH: *Division of Public-health Education.* This division concerns itself with the task of disseminating information on public health and its various related problems, which is accomplished, in the main: first, through the publication of the monthly BULLETIN, which is sent free to the citizens of Kansas upon request; second, the publication of special pamphlets on the various communicable diseases; third, the publication of special pamphlets in relation to the various phases of child hygiene and child care; fourth, the publication of pamphlets related to water supply and sewage disposal, the proper safeguarding of household well water and the proper construction of outside sanitary toilets, all of the above-mentioned pamphlets being available to Kansans upon request; fifth, the production of posters, exhibits and signs; sixth, a stereopticon loan and moving-picture-film library; seventh, the giving of public addresses and lectures, oftentimes illustrated with the stereopticon and moving picture; and eighth, press articles on various phases and subjects related to public health and personal hygiene.

This division is under the direct supervision of the executive officer. It answers thousands of inquiries yearly concerning local problems and matters related to personal and public health.

EIGHTH: *The Division of Public-health Nursing.* This is the newest division of the State Board of Health, the personnel of which at the present time consists of a chief state supervising nurse and three field assistants. The state supervisor of nurses has general supervision over all public-health nurses in the state in relation to the professional side of nursing. The public-health nurse is the most recent and one of the most important developments of modern public-health work. A public-health nurse is a graduate nurse from a standard school of nursing, and who has had, in addition, at least a four months' course in an approved school of public-health nursing. This training fits her for being the most important assistant to the health officer, for it is she who goes directly into the homes to minister to the sick and injured, particularly into the poor families of a community who cannot afford trained nurses; she instructs mothers in the care of infants and the proper preparation of foods, not only by word of mouth but by actual demonstration. In homes where communicable diseases exist she assists in safeguarding the family by advice and personal instruction as to how to care for this class of cases and to prevent the infection of others; she assists in conducting mothers' conferences and baby and tuberculosis clinics, particularly devoting her time and energy to the care of the poor of the community, and to those who are ignorant, careless and neglectful of their own health and the rights of others.

The Division of Public-health Nursing can assist in showing a community the need and value of a public-health nursing service; how to organize and conduct such an organization; furnish standards of nursing service, and an outline or program of work for the coöperation of the community with the local health department. It gives counsel in problems of organization and administration. It can assist, through its "placement service," in securing well-trained public-health nurses, thereby protecting the people of the state against a poor quality of service. Its circulating public-health-nursing library is at the service of organizations and clubs as well as individuals.

This division can be of service to the public-health nurses of the state in the following manner:

1. It can provide specific information concerning methods of procedure in public-health nursing and coöperate in maintaining those methods.
2. It can provide standards for efficient work and point out opportunities for extended usefulness.
3. It can advise concerning problems connected with the public-health nursing service and assist in adjusting difficulties.
4. It can advise concerning courses in public-health nursing.
5. It can, through its staff of advisory nurses, give personal consultation service in addition to that offered by mail.
6. It can, through the holding of regular district conferences, bring the various public-health nurses into closer contact with one another, and in this way each nurse learns of the scope of work and how it is conducted by each unit. Through the free discussion of problems and the solution of same, opportunity is offered for a broader knowledge in the solving of public-health nursing problems and the best policies to pursue.
7. Its circulating public-health-nursing library of books and pamphlets (in process of organization) will be essentially conducted for the use of the public-health nurses in Kansas, in order that they may be well informed in the various branches of public-health nursing and public-health activities in general.
8. Its placement service can assist in securing suitable public-health nursing positions in the state of Kansas.

Through these various divisions of the State Board of Health the executive officer of the board is glad to serve the people of the state. If any local problem in any community of the state seems to require the advice or coöperation of the State Board of Health, the department will be glad to respond, upon request of the local authorities.

S. J. Crumbine, M.D.,

Secretary and Executive Officer, Kansas State Board of Health, in Health.

The Frequent Fly.

The fly iz not only a domestik critter, but a friendly one. How they git born i don't kno, but i hav thought they didn't wait tew be born, but come just az they am. Menny ov them are cut off in the flower of their youth, and usefulness. Sum loze their lives by lighting too near the rim ov a toad's mouth, and fall in when the toad gaps. Thousands find a watery grave, bi gitting drowned—in milk cans. Flys morally considered are like other human beings; they won't light on a good, helthy spot in a man, not if they can find a place that iz a little raw. I believe they are ov temprate habits, and altho they hang around grocerys a good deal, i never see a fly the wuss for liquor, but i have often seen liquor that waz a good deal the wuss for flys.—*Josh Billings' Farmers' Allminax, published in 1871.*

Report of Public Health Laboratory for May, 1922.

	May.		*April.*	
1. Complement fixation test for syphilis:				
Blood specimens from physicians:				
Positive	89		82	
Negative	399		344	
Doubtful	46		26	
Unsatisfactory	34		18	
Totals	——	568	——	470
Blood specimens from Lansing:				
Positive	48		25	
Negative	96		78	
Doubtful	14		20	
Unsatisfactory	2		5	
Totals	——	160	——	128
Spinal fluid from physicians:				
Positive	20		8	
Negative	8		10	
Doubtful	3		1	
Totals	——	31	——	19
Spinal fluid from Lansing:				
Negative	4		1	
Positive	0		0	
Totals	——	4	——	1
2. Globulin test—spinal fluid:				
Positive	24		9	
Negative	5		8	
Totals	——	29	——	17
3. Examination of sputum for tubercle bacilli:				
Positive	16		16	
Negative	95		119	
Unsatisfactory	1		2	
Totals	——	112	——	137
4. Examination of cultures for diphtheria bacilli:				
Positive	37		15	
Negative	78		104	
No growth	4		4	
Totals	——	119	——	123
5. Examination of smears for gonococci:				
From physicians:				
Positive	14		3	
Negative	24		21	
Unsatisfactory	0		1	
Totals	——	38	——	25
From Lansing:				
Positive	7		3	
Negative	83		95	
Totals	——	90	——	98
6. Examination of blood—Widal test for typhoid:				
Positive	6		8	
Negative	14		9	
Unsatisfactory	0		1	
Totals	——	20	——	18
7. Stool cultures for typhoid:				
Negative	2		0	
Positive	0		0	
Totals	——	2	——	0
8. Miscellaneous examinations:				
Cotton from tooth for tuberculosis (G. P. inoculation)	1		..	
Miscellaneous culture	1		..	
Microscopical examination, urine	1		..	
Miscellaneous throat cultures	3		..	
Miscellaneous throat smears	3		..	
Material from throat for tuberculosis (G. P. inoculation)	1		..	
Dark-field examination	1		..	
Cultures from eye	2		..	
Stools for parasites	2		..	
Examination of blood for malaria	1		..	
Colloidal gold, spinal fluids	5		..	
Totals	——	23	——	24
Grand totals		1,196		1,060

LABORATORY ACTIVITIES.

The mobile units of the public-health laboratory have been assembled and are now in active field service. Mobile unit 1 consists of an incubator heated either by electricity or kerosene, and has a space capacity sufficient to meet the needs of a large amount of work. Mobile unit 2 consists of an oven for dry-heat sterilization, an autoclave (pressure cooker), bottles, flasks, test tubes, pipettes, petri dishes, etc. A field microscope and the necessary stains are also available when required. When both of these units are set up a well-equipped laboratory is established, which can take care of practically all laboratory work performed in connection with public-health activities. This mobile laboratory should prove of great value in combating epidemics to which laboratory procedures are applicable.

An intensive sanitary milk survey has been begun by the public-health laboratory in coöperation with the Division of Food and Drugs of the State Board of Health, and with the state dairy commissioner. Atchison was visited on May 29. At the request of the city health officer of Atchison, Dr. C. W. Robinson, the city water was also tested bacteriologically. It is planned to visit Emporia, Winfield, Arkansas City, Augusta, El Dorado, Hays, Dodge City, and other towns.

Analyses of Samples of Rye Flour and Rye Bread.

The object of this work was to try to determine the quality of rye bread as compared with rye flour used in making the bread.

As a rule a sample of flour and a loaf of bread which was made from the flour were taken for analysis.

It is commonly understood that bread is the raised product of flour made light by the generation of gas. This gas is known as carbon dioxide (CO_2). During the baking process the temperature ranges from 230°C. to 260°C. This causes a large expansion of the porous mass, causes it to give off moisture, and converts much of the starch into dextrin in the crust. Three important changes which take place during the process of baking are: a partial breaking up of the starch grains, changes in the character of the proteins, and partial oxidation of the fat. It is due to this last fact that the fat in the finished product is much less than in the flour or bread before it is baked. A good loaf of bread should not be tough or soggy (underrising).

The protein in both bread and flour is uniform. The protein in the flour is higher than in the bread. This is due to the fact that some of the proteins are changed into amino acids, and these in turn are reduced to ammonia, which loses its nitrogen. Since in this case protein equals nitrogen multiplied by 5.70, a loss of nitrogen would mean a lower protein content.

The fat or ether extract of the bread is much lower than that of the flour. This is to be expected, due to the oxidation during baking. It is probable that shortening has been added to the bread in which the fat still remains high.

The ash of both flour and bread was uniform. The high ash in the bread is due to the salt which has been added by the baker and to the use of yeast food. The yeast food is composed of ammonium chloride and sodium chloride. Most bakers try to use about one per cent salt in their bread. That this is closely adhered to is shown by the analyses.

ANALYSIS OF RYE FLOUR AND RYE BREAD, CALCULATED ON A MOISTURE-FREE BASIS.

The flour is supposed to be the same as was used in making the bread.

Insp. No.	Product and Manufacturer.	Protein.	Fat.	Ash.	Salt in bread.	Comparison of ash.*	Moisture.
73094A	Rye flour, J. W. Wilson, Topeka	16.75	1.37	1.86		1.86	11.74
73094	Rye bread, J. W. Wilson, Topeka	15.20	.59	3.56	1.66	1.90	27.22
73095A	Rye flour, L. S. Hall, Topeka	11.65	3.20	1.39		1.39	10.70
73095	Rye bread, L. S. Hall, Topeka	12.06	.82	2.88	1.33	1.55	26.25
73096A	Rye flour, J. W. Harrison, Topeka	11.95	1.71	1.58		1.51	11.13
73096	Rye bread, J. W. Harrison, Topeka	12.88	1.41	2.73	1.12	1.61	24.80
73097A	Rye flour, Royal Bakery, Topeka	17.05	2.85	2.26		2.26	12.64
73097	Rye bread, Royal Bakery, Topeka	15.65	.29	2.88	.55	2.33	28.80
73098A	Rye flour, Wm. Green & Son, Topeka	15.70	2.98	1.49		1.49	11.50
73098	Rye bread, Wm. Green & Son, Topeka	13.19	.93	2.30	.72	1.58	26.68
73099A	Rye flour, Campbell Baking Co., Topeka	16.20	2.64	1.94		1.94	11.70
73099	Rye bread, Campbell Baking Co., Topeka	15.35	.15	2.75	.72	2.03	20.10
50682	Rye bread, Smith & Hofsiss, El Dorado	13.16	2.68	2.68	.76	1.92	34.21
50683	Rye flour, Smith & Hofsiss, El Dorado	17.10	2.24	2.84		2.84	11.30
50684	Rye flour, S. W. Jewell, El Dorado	15.30	2.19	2.01		2.01	7.48
50685	Rye flour, K. B. Bakers' Supply Co., Kansas City, Mo	16.81	2.29	1.95		1.95	8.22
50686	Rye bread, K. B. Bakers' Supply Co., Kansas City, Mo	15.22	.98	2.90	.84	2.06	25.99
50687	Rye bread, K. B. Bakers' Supply Co., Kansas City, Mo.	†					
50688	Rye flour, K. B. Bakers' Supply Co., Kansas City, Mo	17.11	3.08	2.05		2.05	11.31
50689	Rye bread, K. B. Bakers' Supply Co., Kansas City, Mo	14.63	.96	2.77	.92	1.85	25.82

* In the case of the bread we have the total ash minus the amount of salt.

† Sample spoiled when it reached the laboratory.

ANALYSIS OF CHEESE.

Insp. No.	Product.	Retailer.	Jobber.	Protein (N×6.25).	Fat.	P_2O_5.
74002	Wisconsin White Twin	Green & Son, Topeka	Phœler Mercantile Co., Topeka	23.70	32.61	1.09
74003	Wisconsin Longhorn	Green & Son, Topeka	Phœler Mercantile Co., Topeka	22.82	31.63	1.19
74004	Swiss Kraft	Green & Son, Topeka	Phœler Mercantile Co., Topeka	21.00	28.20	1.23
74005	New York	Green & Son, Topeka	Sprague-Warner, Chicago	23.32	34.09	1.17
74006	Kraft Loaf	Green & Son, Topeka	Phœler Mercantile Co., Topeka	20.38	31.20	1.12

H. Robt. DeRose, *Associate Food Chemist.*

Report of Division of Water and Sewage, May, 1922.

ALBERT H. JEWELL, Chief.

Permits Issued or Refused for Waterworks and Sewerage.

Date.	*Place.*	*Nature of improvement.*
May 6	Manhattan	Sewer extensions.
May 13	Sharon Springs	Sewers and sewage disposal.
May 22	Colony	Water system with filtration.
May 22	Wa Keeney	Sewers and sewage disposal.
May 27	Chanute	Water improvements.
May 27	Ellinwood	Sewers.
May 27	La Crosse	Water improvements.

Inspections Made.

May 10	Luray	Water supply.
May 10	Natoma	Water supply.
May 10	Waldo	Water supply.
May 11	Sylvan Grove	Water supply.
May 11	Lucas	Water supply.
May 11-13	Jewell City	Special inspection of water supply, proposed and present.
May 26	Miltonvale	Water supply.

Plans or preliminary reports have been received, or conferences have been held with municipal authorities for new work at the following places:

Fort Scott	Sewer extensions.
St. Francis	Sewer system.
Lawrence	Water improvement.
Herington	Water improvement.
Highland	Water improvement.
Moline	Sewerage.
Sterling	Sewerage.
Utica	Water supply.
Wathena	Water supply and sewerage.
Neodesha	Water—purification improvement.
Atchison	Mausoleum.
Kansas City	Mausoleum.
Atchison	Swimming pool.
Horton	Water improvements.
Ellsworth	Additional water supply.
Brookville	Water supply.
Winona	Water supply.
Lawrence	Sewer extensions.

Record of analyses made in water and sewage laboratory at Lawrence during month of May, 1922:

	Bact.	*Chem.*	*Miscel.*
City supply	624	7	..
Bottled waters	...	1	..
Private supplies	31	..	..
Railroad supplies	1	..	..
Miscellaneous	...	1	..
Ice	58	..	..
Ice supply	2	..	..
Survey	399	..	..
Chlorides	...	..	10
Sand	...	..	8
Sewage	...	..	1
Boiler water	...	1	..
Lime	...	..	1
Totals	1,115	10	20—1,145

Licenses Issued.

Date.	*Town.*	*Name and purpose.*
May 22	Abilene	Belle Springs Creamery Co. Manufactured ice.
May 15	Arkansas City	A. C. Ice & C. S. Co. Manufactured ice.
May 15	Atchison	Crystal Ice Co. Manufactured ice.
May 22	Baldwin	Thudium & Cooper. Manufactured ice.
May 22	Bennington	John Lee. Natural ice.
May 15	Caney	Caney Ice & C. S. Co. Manufactured ice.
May 15	Cawker City	C. W. Hotle. Natural ice.
May 31	Chetopa	Chetopa Ice & Bottling Works. Manufactured ice.
May 31	Columbus	Columbus Ice Co. Manufactured ice.
May 31	Council Grove	Gilman Ice Co. Manufactured ice.

LICENSES ISSUED—Concluded.

Date.	*Town.*	*Name and purpose.*
May 31	El Dorado	El Dorado Elec. & Ref. Co. Manufactured ice.
May 22	Erie	Crystal Ice & Bot. Co. Manufactured ice.
May 31	Frankfort	Frankfort Ice Co. Manufactured ice.
May 15	Goodland	Goodland Ice & Coal Co. Manufactured ice.
May 22	Gypsum	T. P. Wheatley. Natural ice.
May 15	Hanover	H. K. Rowland. Natural ice.
May 22	Hanover	Geo. G. Scheetz, Natural ice.
May 31	Hesston	Hesston Ice Co. Manufactured ice.
May 15	Iola	Iola Ice, C. S. & St. Co. Manufactured ice.
May 31	Jetmore	M. W. Peterson. Natural ice.
May 15	Junction City	Union Light & Power Co. Manufactured ice.
May 31	Kansas City	Railway Ice Co. (two plants). Manufactured ice.
May 22	Lawrence	Griffin Ice Co. Manufactured ice.
May 22	Lindsborg	Lindsborg Ice & Coal Co. Manufactured ice.
May 15	Logan	Lohse Bros. Natural ice.
May 15	Logan	L. L. Search. Natural ice.
May 22	Ludell	Schneider & Co. Manufactured ice.
May 15	McPherson	McPherson Creamery Co. Manufactured ice.
May 22	Morland	Kobler Drug Co. Natural ice.
May 15	Morrowville	Mayberry Meat Market. Natural ice.
May 15	Neodesha	Neodesha Crystal Ice Co. Manufactured ice.
May 31	Oakley	W. M. Prather. Manufactured ice.
May 15	Olathe	City Ice Co. Manufactured ice.
May 31	Oneida	W. A. Russell. Natural ice.
May 31	Osawatomie	Osawatomie Ice Co. Manufactured ice.
May 22	Ottawa	B. D. Bennett. Manufactured ice.
May 15	Paola	Paola Crystal Ice Co. Manufactured ice.
May 22	Parsons	Parsons C. S. & Crys. Ice Co. Manufactured ice.
May 15	Prairie View	Dan Short. Natural ice.
May 15	Rossville	Rossville Ice Co. Manufactured ice.
May 15	Stuttgart	William Devries. Natural ice.
May 15	Tescott	W. W. Watkins. Natural ice.
May 22	Tonganoxie	Franklin Ice Cream Co. Manufactured ice.
May 31	Topeka	Mutual Ice & C. S. Co. Manufactured ice.
May 15	Troy	E. A. Sinclair. Natural ice.
May 15	Westmoreland	H. M. Pomeroy. Natural ice.
May 31	Wichita	Wichita Ice & C. S. Co. Manufactured ice.
May 22	Wichita	Wible Ice & C. S. Co. Manufactured ice.
May 31	Winfield	Winfield Ice & C. S. Co. Manufactured ice.
May 15	Woodruff	Hageman Bros. Natural ice.

Friendship.

Of all felicities, the most charming is that of a firm and gentle friendship. It sweetens all our cares, dispels our sorrows, and counsels us in all extremities. It is a sovereign antidote against all calamities—even against the fear of death itself.—*Joseph W. Bishop.*

Positive Health.

The following definition, published in the *Health Quarterly* of the Board of Health of Manchester, N. H., is an inspiration—something indeed worth working for:

"Health of itself makes life a perpetual joy. Nothing daunts, nothing overawes, nothing discourages and nothing overpowers the man and woman possessed of health. Health means not only vigor and energy of body, but also clarity and strength of mind, purity and beauty of soul. The healthy person dominates life instead of allowing life to dominate him. He scarcely thinks of his body as consisting of parts or as performing separate functions. To him the body is but one harmonious whole. To such a man work is a joy. He regards obstacles as but opportunities for testing his strength. He hardly knows what weariness is. He never experiences exhaustion. Merely to grasp his hand is a pleasure. To peer into his mind serves as a stimulus to higher achievement. If you have health, then cherish it, guard it, and treasure it as you treasure life, for out of it are the issues of life."

YESTERDAY.

All to ourselves, we think of you;
Think of the things we used to do;
Think of the things we used to say;
Think of each happy yesterday.
Sometimes we sigh; sometimes we smile;
But we keep each olden, golden while
On memory's golden file.
—*Sally Edith Roby.*

□

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